

WEST Search History

DATE: Thursday, October 31, 2002

Set Name Query
side by side

Hit Count Set Name
result set

DB=USPT; PLUR=YES; OP=OR

L3	L1 and (angiogenesis!)	55	L3
L2	L1 and (angiogenic! or antiangiogenic!)	28	L2
L1	((514/18)!.CCLS.)	1202	L1

END OF SEARCH HISTORY

Set Name Query
side by side

Hit Count Set Name
result set

DB- USPT; PLUR YES; OP OR

<u>L25</u>	L24 AND (SURGERY OR SURGICAL OR CHEMOTHERAP\$ OR RADIATION OR "LASER THERAPY")	21	<u>L25</u>
<u>L24</u>	L23 AND (dna\$ OR VECTOR\$)	25	<u>L24</u>
<u>L23</u>	L22 AND (OCULAR OR CHOROIDAL OR RETINA\$ OR BARTONELLOSIS OR "CHRONIC INFLAMMATION" OR OSTEOARTHRITIS OR RHEUMATOID OR PHEMPHIGOID OR TRACHOMA OR OSLER\$)	25	<u>L23</u>
<u>L22</u>	L21 AND (TUMOR\$ OR METASTASES OR RETINAL OR CHOROIDAL\$)	35	<u>L22</u>
<u>L21</u>	L20 AND INFLAM\$	38	<u>L21</u>
<u>L20</u>	L19 AND PHARMACEUTICAL	49	<u>L20</u>
<u>L19</u>	L18 AND (CARBOXY OR "CARBOXY TERMINAL")	56	<u>L19</u>
<u>L18</u>	L17 AND (CARBOXY OR "CARBOXY TERMINAL")	56	<u>L18</u>
<u>L17</u>	L15 AND (ACETYL\$ OR BENZOYL\$ OR ALKYL SULFONYL\$ OR ARYL SULFONYL\$ OR ALKYLAMINOACYL\$ OR FORMYL\$)	95	<u>L17</u>
<u>L16</u>	L15 AND (CAP OR CAPS OR CAPPED\$)	41	<u>L16</u>
<u>L15</u>	L14 AND ANGIOGEN\$	168	<u>L15</u>
<u>L14</u>	"SER ASN SER" OR "SER GLN SER"	2398	<u>L14</u>
<u>L13</u>	L10 OR L11	1	<u>L13</u>
<u>L12</u>	6027711.PN. AND (OCULAR OR CHOROIDAL OR RETINA OR BARTONELLOSIS OR "CHRONIC INFLAMMATION" OR OSTHEOARTHRITIS OR RHEUMATOID OR PHEMPHIGOID OR OSLER OR RENDU OR TRACHOMA)	0	<u>L12</u>
<u>L11</u>	6027711.PN. AND (TUMOR\$ OR METASTASES OR RETINAL OR CHOROIDAL)	1	<u>L11</u>
<u>L10</u>	6027711.PN. AND INFLAM\$	1	<u>L10</u>
<u>L9</u>	L8 or l6	3	<u>L9</u>
<u>L8</u>	6027711.pn. and (benzoyl\$ or alkylsulfonyl\$ or arylsulfonyl\$ or alkylaminoacyl\$ or arylaminoacyl or formyl\$)	1	<u>L8</u>
<u>L7</u>	6027711.pn. and (acetyl\$)	0	<u>L7</u>
<u>L6</u>	L5 and (cap or caps or capped)	3	<u>L6</u>
<u>L5</u>	l2 and tripeptide\$	19	<u>L5</u>
<u>L4</u>	L2 and ("snss" or "sqss")	0	<u>L4</u>
<u>L3</u>	L2 and ("ser gln ser" or "ser asn ser")	0	<u>L3</u>
<u>L2</u>	L1 and angiogen\$	48	<u>L2</u>
<u>L1</u>	((530/331)!.CCLS.)	1259	<u>L1</u>

S22 0 ANGIOGEN? AND RGD AND (VECTOR OR DNA OR RNA)
 S23 178 S15 AND VECTOR
 S24 701 S15 AND (DNA OR RNA)
 S25 14 S21 AND S24
 S26 7 S21 AND TISSUE OR TISSUES,
 ?s s26 and s26
 6627 ANGIOGEN?
 7 S26
 S27 1 ANGIOGEN? AND S26
 ?s s26 and osmotic?
 7 S26
 6115 OSMOTIC?
 S28 0 S26 AND OSMOTIC?
 ?s s26 and pump?
 7 S26
 9517 PUMP?
 S29 2 S26 AND PUMP?
 ?type s29/full/all

29/9/1 (Item 1 from file: 5)
 DIALOG(R)File 5: Biosis Previews(R)
 to 1002 BIOSIS. All rts. reserv.

1301448 BIOSIS NO.: 26-0100536977

Potential tumor-targeting peptide vector of histidylated oligolysine conjugated to a tumor-homing RGD motif.

AUTHOR: Aoki Yaji(a); Hosaka Shigetoshi; Kawa Shigeyuki; Kiyosawa Kendo
 ADDRESS: (a)The Second Department of Internal Medicine, Shinshu
 University School of Medicine, 3-1-1 Asahi, Matsumoto, 390-8621;
 yaji@shsp.m.d.shinshu-u.ac.jp**Japan

JOURNAL: Cancer Gene Therapy 8 (10):p783-787 October, 2001

MEFIM: print

ISSN: 1078-1901

COMMENT TYPE: Article

REF TYPE: Abstract

LANGUAGE: English

SCHEME LANGUAGE: English

ABSTRACT: We have developed a potential tumor-targeting peptide **vector** (CRGD-hK) that is intended to be systemically and repeatedly administered to patients with advanced solid tumors. The peptide **vector** of 36 L-amino acid residues, CRGDCE(K(H-)KKK)6, comprises a tumor-homing RGD motif, a **DNA**-binding oligolysine, and histidyl residues to facilitate the delivery into the cytosol. Using cytomegalovirus-driven luciferase expression plasmids as a reporter, we tested the transfection efficiency of CRGD-hK in hepatoma and pancreatic cancer cell lines. Transfection with the CRGD-hK/plasmid complexes (molar ratio 4000:1) was inhibited by 10 nM bafilomycin A1, an inhibitor of the vacuolar ATPase/endosomal protein **pump**, or 10 mM cycloRGDfV, an integrin $\alpha_5\beta_3$ antagonist, indicating that the three elements of CRGD-hK could function as expected, at least in vitro. In nude mice bearing tumors created by subcutaneous inoculation, luciferase activity in the tumor **tissues** 48 hours after the injection of the CRGD-hK/plasmid complexes through the tail vein (20 μ g plasmids per mouse) was significantly higher than that in the lung, kidney, and spleen, but only slightly higher than that in the liver. Although the latter difference was small, we propose a potential **gene therapy** for advanced solid tumors through use of the tumor-targeting peptide **vector**.

REGISTRY NUMBERS: 88899-55-2: BAFILOMYCIN A-1; 9014-00-00: LUCIFERASE;
 61869-41-8Q: LUCIFERASE; 61969-99-1Q: LUCIFERASE; 61970-00-1Q:
 LUCIFERASE; 62213-54-1Q: LUCIFERASE; 76106-81-5Q: LUCIFERASE

DESCRIPTORS:

MAJOR CONCEPTS: Methods and Techniques; Molecular Genetics (Biochemistry
 and Molecular Biophysics); Tumor Biology

BIOSYSTEMATIC NAMES: Herpesviridae--Animal Viruses, Viruses,
 Microorganisms; Hominidae--Primates, Mammalia, Vertebrata, Chordata,
 Animalia; Muridae--Rodentia, Mammalia, Vertebrata, Chordata, Animalia

ORGANISMS: HepG2 cell line (Hominidae)--human hepatoma cells; MiaPaCa-2 cell line (Hominidae)--human pancreatic cancer cells; MIA104a cell line (Hominidae)--human pancreatic cancer cells; P43 cell line (Hominidae)--human hepatoma cells; cytomegalovirus (Herpesviridae)--expression system; mouse (Muridae)--animal model, male, nude, strain-BALB/c

ORGANISMS: PARIS ETC: cytosol

BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA): Animal Viruses; Animals; Chordates; Humans; Mammals; Microorganisms; Nonhuman Mammals; Nonhuman Vertebrates; Primates; Rodents; Vertebrates; Viruses

CHEMICALS & BIOCHEMICALS: DNA-binding oligolysine; RGD motif; bafilomycin A1--vacuolar ATPase endosomal proton pump inhibitor; histidyl residues; luciferase--expression; luciferase expression plasmid--reporter; tumor-targeting peptide vector

METHODS & EQUIPMENT: nonviral gene therapy--genetic method, therapeutic method

MISCELLANEOUS TERMS: transfection efficiency

CONCEPT CODES:

03506 Cytology and Cytochemistry-Animal
03507 Cytology and Cytochemistry-Human
03508 Genetics and Cytochemistry-General
03509 Genetics and Cytochemistry-Animal
03510 Genetics and Cytochemistry-Human
10001 Enzymes-General and Comparative Studies; Coenzymes
10004 Neoplasms and Neoplastic Agents-Pathology; Clinical Aspects; Systemic Effects
11001 Genetics of Bacteria and Viruses
11005 Virology-Animal Host Viruses

BIOSYSTEMATIC CODES:

0611 Herpesviridae (1993-)
0612 Hominidae
0613 Muridae

29/9/2 (Item 1 from file: 155)

DIAGNOSIS FILE 100: MEDLINE

1278873 11511126 PMID: 11687901

Potential tumor-targeting peptide vector of histidylated oligolysine conjugated to a tumor-homing RGD motif.

Aoki Y; Hosaka S; Kawa S; Kiyosawa K

The Second Department of Internal Medicine, Shinshu University School of Medicine, Matsumoto, Japan. yaoki55@hsp.md.shinshu-u.ac.jp

Cancer Gene Therapy (England) Oct 2001; 8 (10): p783-9, ISSN 0969-1413 Journal Code: 9432230

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Article: INDEX MEDICUS

We have developed a potential tumor-targeting peptide vector (cRGD-hK) that is intended to be systemically and repeatedly administered to patients with advanced solid tumors. The peptide vector of 36 l-amino acid residues, cRGD(hK)-[KKK]6, comprises a tumor-homing RGD motif, a DNA-binding oligolysine, and histidyl residues to facilitate the delivery into the cytosol. Using cytomegalovirus-driven luciferase expression plasmids as a reporter, we tested the transfection efficiency of cRGD-hK in hepatoma and pancreatic cancer cell lines. Transfection with the cRGD-hK/plasmid complexes (molar ratio 4000:1) was inhibited by 50 nM bafilomycin A1, an inhibitor of the vacuolar ATPase endosomal proton pump, or 10 microM cycloR38FV, an integrin alphavbeta3 antagonist, indicating that the three elements of cRGD-hK could function as expected, at least in vitro. In nude mice bearing tumors created by subcutaneous inoculation, luciferase activity in the tumor tissues 48 hours after the injection of the cRGD-hK/plasmid complexes through the tail vein (20 microg plasmids per mouse) was significantly higher than that in the lung, kidney, and spleen, but only slightly higher than that in the liver. Although the latter difference was small, we propose a potential nonviral gene therapy for

advanced solid tumor (e.g., liver) and the use of a polylysine vector.

Tags: Animal; Human; Male; Support, Non-U.S. Gov't

Descriptors: *Gene Therapy--methods--MI; *Genetic Vectors; *Histidine; *Liver Neoplasms, Experimental--therapy--TH; *Oligopeptides--genetics--GE; *Pancreatic Neoplasms--therapy--TH; *Polylysine--genetics--GE; Antibiotics, Macrolide--pharmacology--PD; Enzyme Inhibitors--pharmacology--PD; Liver Neoplasms, Experimental--metabolism--ME; Liver Neoplasms, Experimental--pathology--PA; Luciferase--metabolism--MH; Mice; Mice, Inbred BALB C; Mice, Nude; Oligopeptides--pharmacokinetics--PK; Pancreatic Neoplasms--metabolism--ME; Pancreatic Neoplasms--pathology--PA; Plasmids; Polylysine--pharmacokinetics--PK; Proton-Translocating ATPases--antagonists and inhibitors--AI; **Tissue Distribution**; Tumor Cells, Cultured

CAS Registry No.: (Antibiotics, Macrolide); 0 (Enzyme Inhibitors); 0 (Genetic Vectors); 0 (Oligopeptides); 0 (Plasmids); 25104-18-1 (Polylysine); 71-00-1 (Histidine); 88999-55-2 (bafilomycin A1); 89996-88-2 (gamma-L-glutyl-L-aspartic acid)

Enzyme No.: EC 1.13.12.- (Luciferase); EC 3.6.3.14

Proton-Translocating ATPases:

Record Date Created: 19911031

nds

Sr	Items	Description
S1	1	AM 'SHUEY W' OR AU='SHUEY S A' OR AU='SHUEY S R' OR AU='SHUEY STEVE' OR AU='SHUEY STEVEN W'
S2	1	AM 'MOUSA SHAKER' OR AU='MOUSA SHAKER A' OR AU='MOUSA SHAKER ARNE'
S3	56395-1	1 OR S2
S4	125	S1 OR S3
S5		S4 AND ANGIOGENS
S6	43	S4 AND ANGIOGEN?
S7	0	OSLER AND WEBBER AND FENDU
S8	0	"OSLER-WEBBER-FENDU"
S9	100	BARTONELLOSTIS
S10	0	S9 AND ANGIOGEN?
S11	57139	OSMOTIC
S12	1	S4 AND S11
S13	2413	12 AND ANGIOGEN?
S14	0	S11 AND ANGIOGEN?
S15	5198	EGD
S16	183	S15 AND ANGIOGEN?
S17	63	S16 AND PT-2000
S18	0	S17 AND (SER OF THR OR CYS) AND (ASN OR GLN)
S19	0	ANGIOGEN AND "SER-ASN-SER" OR "SER-GLN-SER"
S20	0	ANGIOGEN AND "SER-ASN-SER" OR "SER-GLN-SER"
S21	0	ANGIOGEN AND "ENS" OR "SQS"
S22	0	ANGIOGEN AND BIG AND (VECTOR OR DNA OR RNA)
S23	178	S15 AND VECTOR
S24	761	S15 AND (DNA OR RNA)
S25	54	S23 AND S24
S26	7	S25 AND (TISSUE OR TISSUES)
S27	0	ANGIOGEN? AND S26
S28	0	S26 AND OSMOTIC?
S29	1	S26 AND PMP?

Is s26 and (vector? or virus? or adenovirus? or retrovirus? or "nucleic acid" or "nucleic acids")

7	S26
204339	VECTOR?
1004640	VIRUS?
48874	ADENOVIRUS?
50319	RETROVIRUS?
1848	NUCLEIC ACID
7409	NUCLEIC ACIDS
S30	7
	S26 AND (VECTOR? OR VIRUS? OR ADENOVIRUS? OR RETROVIRUS? OR "NUCLEIC ACID" OR "NUCLEIC ACIDS")

Is s26 and (dna or rna or liposome? or polylysine?

-	S26
1326807	DNA
707277	RNA

S31 7 S26 AND (DNA OR RNA OR LIPOSOME? OR POLYLYSINE?)
 10 S31 and S31
 " S31
 " S31
 S12 S31 AND S31
 2 type S12/100/100

32/9/1 (Item 1 from file: 5)
DIALOG(R)File 9: Biosis Previews(F,
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1332-829 BIOSIS NO.: 10019053-6977

Potential tumor-targeting peptide vector of histidylated oligolysine conjugated to a tumor-homing RGD motif.

AUTHOR: Asaki Yuji (a); Hosaka Shigetoshi; Kawa Shigeyuki; Kiyosawa Kenji

AUTHOR ADDRESS: (a) The Second Department of Internal Medicine, Shinshe

University School of Medicine, 3-1-1 Asahi, Matsumoto, 390-8621.

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JOURNAL: Cancer Gene Therapy 8 (10):p783-787 October, 2001

MEDIUM: 10:2 ml

ISSN: 0924-6460

DOCUMENT TYPE: Article

BEFORE THE: Subpoena

THE UNIVERSITY OF CHICAGO PRESS

SUMMARY LANGUAGE: English

ABSTRACT: We have developed a potential tumor-targeting peptide **vector** (cRGD-nK) that is intended to be systemically and repeatedly administered to patients with advanced solid tumors. The peptide **vector** of 36 L-amino acid residues, cRGDGF K(H)KKK)6, comprises a tumor-homing RGD motif, a DNA-binding oligolysine, and histidyl residues to facilitate the delivery into the cytosol. Using cytomegalovirus-driven luciferase expression plasmids as a reporter, we tested the transfection efficiency of cRGD-nK in hepatoma and pancreatic cancer cell lines. Transfection with the cRGD-nK plasmid complexes (molar ratio 4000:1) was inhibited by 10 nM bafilomycin A1, an inhibitor of the vacuolar ATPase endosomal proton pump, or 10 μ M cycloRGDFV, an integrin α 5 β 3 antagonist, indicating that the three elements of cRGD-nK could function as expected, at least in vitro. In nude mice bearing tumors created by subcutaneous inoculation, luciferase activity in the tumor **tissues** 48 hours after the injection of the cRGD-nK/plasmid complexes through the tail vein (20 μ g plasmids per mouse) was significantly higher than that in the lung, kidney, and spleen, but only slightly higher than that in the liver. Although the latter difference was small, we propose a potential nonviral gene therapy for advanced solid tumors through use of the tumor-targeting peptide **vector**.

REGISTRY NUMBERS: 44199-75-2: BATHILOMYCIN A-1; 9014-00-0Q: LUCIFERASE;
01869-41-8Q: LUCIFERASE; 61969-99-1Q: LUCIFERASE; 61970-00-1Q:
LUCIFERASE; 62113-54-1Q: LUCIFERASE; 76106-81-5Q: LUCIFERASE

DEACF IETCIS:

MAJOR CONCEPTS: Methods and Techniques; Molecular Genetics (Biochemistry and Molecular Biophysics); Tumor Biology

BIOSYSTEMATIC NAMES: Herpesviridae--Animal Viruses , Viruses

Microorganism; Homidae--Primates, Mammalia, Vertebrata, Chordata, Animalia;
Muridae--Rodentia, Mammalia, Vertebrata, Chordata, Animalia

ORGANISMS: HepG2 cell line (Hominidae)--human hepatoma cells; Hs766T cell line (Hominidae)--human pancreatic cancer cells; MIAPaCa-2 cell

cell line) (Hominidae)--human pancreatic cancer cells; H1975 2 cell line (Hominidae)--human pancreatic cancer cells; PLC cell line (PRF cell line) (Hominidae)--human hepatoma cells; cytomegalovirus

Herpesviridae)--expression system; mouse (Muridae)--animal model, male, nude, strain-BALB/c

ORGANISMS: Bacteria, Fungi, Protozoa

BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA): Animal **Viruses** ; Animals;
Chordates; Humans; Mammals; Microorganisms; Nonhuman Mammals; Nonhuman
Vertebrates; Primates; Reptiles; Vertebrates; **Viruses**

CHEMICALS & BIOCHEMICALS: DNA-binding; oligonucleotides; RGD motif; bifidomycin A-1--vascular ATPase endosomal protein; myosin; histidyl residues; luciferase--expression; luciferase expression plasmids--reporter; tumor-targeting peptide **vector**
METHODS & EQUIPMENT: nonviral gene therapy--genetic method, transfection method

MISCELLANEOUS TERMS: transfection efficiency

CONCEPT CODES:

02006 Cytology and Cytochemistry-Animal
02008 Cytology and Cytochemistry-Human
04002 Genetics and Cyto genetics-General
04004 Genetics and Cyto genetics-Animal
04006 Genetics and Cyto genetics-Human
10002 Enzymes-General and Comparative Studies; Coenzymes
14004 Neoplasms and Neoplastic Agents-Pathology; Clinical Aspects; Systemic Effects
31002 Genetics of Bacteria and Viruses
33006 Virology-Animal Host Viruses

BIOBIBLIOGRAPHIC CODES:

00012 Herpesviridae (1993-)
86015 Hominidae
86075 Muridae

32/9/2 (Item 2 from file: 5)

DIALOG R)File 5: Biosis Previews (R)

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12244714 BIOSIS NO.: 200000003216

Structural characterization of mouse CD97 and study of its specific interaction with the murine decay-accelerating factor (DAF, CD55).

AUTHOR: Qian Y-M; Haino M; Kelly K; Song W-C(a)

AUTHOR ADDRESS: (a) Center for Experimental Therapeutics, University of Pennsylvania School of Medicine, 421 Curie Boulevard, 1351 BRB11/III, Philadelphia, PA, 19104-6100 USA

JOURNAL: Immunology 98 (2):p303-311 Oct., 1999

ISSN: 0019-2805

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

SUMMARY LANGUAGE: English

ABSTRACT: CD97 is a newly identified, activation-associated human leukocyte antigen with seven putative transmembrane domains. It has an extended extracellular segment containing several adhesion molecule structure motifs, and has been shown to interact with the human complement regulator, decay-accelerating factor (DAF, CD55). To understand further the interaction between CD97 and DAF, as well as the structure and function of CD97 in general, we have cloned the mouse CD97 cDNA and studied the encoded protein for its membrane association property and ability to interact specifically with the murine decay-accelerating factor. The full-length mouse CD97 cDNA that we have cloned and characterized encodes a protein that is 60% identical to the three epidermal growth factor (EGF) domain-containing form of human CD97 but does not contain the Arg-Gly-Asp (RGD) motif which is present in human CD97. Two other alternatively spliced forms of mouse CD97 were also identified. These forms differ by the number of EGF-like sequence repeats present in the N-terminal region. Northern blot analysis revealed that CD97 is expressed widely in mouse **tissues** and in resting as well as activated cultured mouse splenocytes. Transient transfection of human embryonic kidney (HEK) 293 cells with the mouse CD97 cDNA in a green-fluorescence protein **vector** (pEGFP-N1) showed plasma membrane targeting of the expressed protein. Western blot analysis confirmed its membrane association and identified the existence of a processed N-terminal fragment, supporting the notion that CD97 on the cell membrane is composed of post-translationally generated subunits. Adhesion studies demonstrated that normal, but not DAF knockout mouse erythrocytes and splenocytes adhered to mouse CD97-transfected HEK cells. The interaction

CD97 and DAF was 1 and 100, respectively. These results indicate that the general structure, sequence and chemical property and DAF-binding ability of CD97 are conserved and that the adhesive interaction between CD97 and DAF is independent of the RGD motif. The finding that CD97 is distributed widely in various mouse **tissues** suggests that CD97 may have other roles beyond lymphocyte activation.

REGISTRY NUMBERS: 49085-47-9: DECAY-ACCELERATING FACTOR; 62229-11-9:

EPIDERMAL GROWTH FACTOR

DESCRIPTORS:

MAJOR CONCEPTS: Biochemistry and Molecular Biophysics; Cell Biology;

Immune System (Chemical Coordination and Homeostasis)

BIOSYSTEMATIC NAMES: Hominidae--Primates, Mammalia, Vertebrata, Chordata,

Animalia; Muridae--Rodentia, Mammalia, Vertebrata, Chordata, Animalia

ORGANISMS: 293 cell line (Hominidae)--human embryonic kidney cells;

mouse Muridae

ORGANISMS: PARTS ETC: erythrocytes--blood and lymphatics; lymphocyte--

blood and lymphatics, immune system; splenocytes--blood and lymphatics

BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA): Animals; Chordates; Humans;

Mammals; Nonhuman Mammals; Nonhuman Vertebrates; Primates; Rodents;

Vertebrates

GENITALS & BIOCHEMICALS: CD97--HLA, human, mouse, structural

characterization; arginyl-glycyl-aspartic acid motif; cDNA {

complementary DNA }; decay-accelerating factor {CD55, DAF}--murine;

epidermal growth factor

MISCELLANEOUS TERMS: amino acid sequence; nucleotide sequence

CONCEPT CODES:

14012 Immunology and Immunochemistry-General; Methods

14016 Cytology and Cytochemistry-Human

14020 Biochemical Studies-General

14022 Metabolism-General Metabolism; Metabolic Pathways

14023 Blood, Blood-Forming Organs and Body Fluids-General; Methods

BIOSYSTEMATIC CODES:

90115 Hominidae

90175 Muridae

32/9/3 (Item 3 from file: 5)

DIAGNOSTIC File 5: Biosis Previews(R)

to 1002 BIOSIS. All rts. reserv.

1119127 BIOSIS NO.: 199799813672

Increased in vitro and in vivo gene transfer by adenovirus vectors containing chimeric fiber proteins.

AUTHOR: Wickham Thomas J(a); Tzeng Edith; Shears Larry L.ii; Roelvink Peter

W; Li Yuan; Lee Gai M; Brough Douglas E; Lizonova Elena; Kovacs Imre

AUTHOR ADDRESS: CalGenVec Inc., 12111 Parklawn Dr., Rockville, MD 20852--

USA

JOURNAL: Journal of Virology 71 (11):p8221-8229 1997

ISSN: 0022-538X

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: Alteration of the natural tropism of **adenovirus** (Ad) will permit gene transfer into specific cell types and thereby greatly broaden the scope of target diseases that can be treated by using Ad. We have constructed two Ad **vectors** which contain modifications to the Ad fiber coat protein that redirect **virus** binding to either alpha-v integrin (AdZ.F(RGD)) or heparan sulfate (AdZ.F(pk7)) cellular receptors. These **vectors** were constructed by a novel method involving E4 rescue of an E4-deficient Ad with a transfer **vector** containing both the E4 region and the modified fiber gene. AdZ.F(RGD) increased gene delivery to endothelial and smooth muscle cells expressing alpha-v integrins. Likewise, AdZ.F(pk7) increased transduction 5- to 50-fold in multiple cell types lacking high levels of Ad fiber receptor, including macrophage, endothelial, smooth muscle, fibroblast, and T cells. In

addition, Ad5.FibPK7) significantly increased gene transfer in vivo to vascular smooth muscle cells of the porcine iliac artery following balloon angioplasty. These **vectors** may therefore be useful in gene therapy for vascular restenosis or for targeting endothelial cells in tumors. Although binding to the fiber receptor still occurs with these **vectors**, they demonstrate the feasibility of **tissue**-specific receptor targeting in cells which express low levels of Ad fiber receptor.

REGISTRY NUMBERS: 94-0-30-0: HEPARAN SULFATE

DESCRIPTION:

MAJOR CONCEPTS: Bi. Chemistry; and Molecular Biophysics; Blood and Lymphatics (Transport and Circulation); Cardiovascular System (Transport and Circulation); Cell Biology; Genetics; Infection; Methods and Techniques; Microbiology; Muscular System; Movement and Support; BI. SYSTEMATIC NAMES: Adenoviridae-- **Viruses**; Suidae--Artiodactyla, Mammalia, Vertebrata, Chordata, Animalia

ORGANISMS: **adenovirus** (Adenoviridae); pig (Suidae)

BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA: animals; artiodactyls; mammals; mammals; macroorganisms; nonhuman mammals; nonhuman vertebrates; vertebrates; **viruses**)

CHEMICALS & BIOCHEMICALS: HEPARAN SULFATE

MISCELLANEOUS TERMS: Research Article; ALPHA-INTEGRIN; BALLOON ANGIOPLASTY; BLOOD AND LYMPHATICS; CHIMERIC FIBER PROTEINS; CIRCULATORY SYSTEM; **DNA** TRANSFER METHOD; ENDOTHELIAL CELL; FIBROBLAST; GENE THERAPY DEVELOPMENT; GENE **VECTOR**; GENETIC METHOD; HEPARAN SULFATE; ILIAC ARTERY; IMMUNE SYSTEM; MACROPHAGE; METHODOLOGY; MOLECULAR GENETICS; MUSCULAR SYSTEM; SKELETAL SYSTEM; SMOOTH MUSCLE; T CELL; THERAPEUTIC METHOD; **TISSUE**-SPECIFIC RECEPTOR TARGETING; VIRAL TRANSFECTION; **VIRUS** CELLULAR RECEPTOR

CONTENT CODES:

10000 Cytology and Cytochemistry-Animal
10001 Genetics and Cytogenetics-Animal
10002 Biochemical Methods-Nucleic Acids, Purines and Pyrimidines
10003 Biochemical Studies-Proteins, Peptides and Amino Acids
10004 Biochemical Studies-Carbohydrates
10005 Cardiovascular System-General; Methods
10006 Blood, Blood-Forming Organs and Body Fluids-General; Methods
10007 Blood, Blood-Forming Organs and Body Fluids-Blood Cell Studies
10008 Blood, Blood-Forming Organs and Body Fluids-Lymphatic Tissue and Reticuloendothelial System
10009 Muscle-General; Methods
20001 Genetics of Bacteria and Viruses
30006 Virology-Animal Host Viruses
30006 Medical and Clinical Microbiology-Virology

BIOSYSTEMATIC CODES:

02001 Adenoviridae (1993-)
85740 Suidae

32/9/4 (Item 4 from file: 5)

DIALOG File: 5:Biosis Previews(R)
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0910194 RI 015 N 1: 1995 08220712

A fruiting body-specific cDNA, mfbAc, from the mushroom *Lentinus edodes* encodes a high-molecular-weight cell-adhesion protein containing an Arg-Gly-Asp motif.

AUTHOR: Konach Osamu; Muto Akihiko; Hagiwara Susumu; Takagi Junichi; Saito Yoji; Enomoto Fumio(a)

AUTHOR ADDRESS: (a)Dep. Life Sci., Tokyo Inst. Technol., Nagatsuta, Midori-ku, Yokohama 227**Japan.

JOURNAL: Gene (Amsterdam) 154 (1):p31-37 1995

ISSN: 0378-1119

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: A cDNA clone (designated mfbAc), encoding 2157 amino acids (aa),

was isolated from a mature fruiting-body cDNA library of the edible mushroom *Lentinus edodes*. The *MFBA* transcript was abundant in mature fruiting bodies, but absent in immature fruiting bodies and absent in earlier developmental stages and in the vegetative mycelium. Although more abundant in the pileus than the stipe, only low levels were found in the gill **TISSUE**. The deduced *MFBA* protein (548 aa), contained a cell-surface attachment-promoting Arg-Gly-Asp (**RGD**) motif. *MFBA* was produced in *Escherichia coli* using a maltose-binding protein (MBP) fusion **vector**, but it was cleaved into four fragments even in a protease-deficient host. A 425-aa *MFBA* peptide containing the **RGD** motif (named *MFBA*(532-1006) peptide) was successfully produced using the pGAP-27 expression system. This *MFBA*(532-1006) peptide exhibited a cell adhesion and spreading activity toward mammalian cells. This activity of the *MFBA* fragment was competitively inhibited by the Gly-Arg-Gly-Asp-Ser-Pro peptide but not by the Gly-Arg-Gly-Glu-Ser-Pro peptide, showing that the **RGD** motif of *MFBA* is essential for the cell-binding activity.

DESCRIPTORS:

MAJOR CONCEPTS: Biochemistry and Molecular Biophysics; Cell Biology; Genetics; Membranes (Cell Biology); Molecular Genetics (Biochemistry and Molecular Biophysics); Reproduction
 BIOSYSTEMATIC NAMES: Basidiomycetes--Fungi, Plantae; Fungi-Unspecified--Fungi, Plantae; Muridae--Rodentia, Mammalia, Vertebrata, Chordata, Animalia
 OR ANIMS: Basidiomycetes (Fungi - Unspecified; *Lentinus edodes* (Basidiomycetes; Muridae (Muridae)
 BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA): animals; chordates; fungi; mammals; microorganisms; nonhuman mammals; nonhuman vertebrates; nonvascular plants; plants; rodents; vertebrates
 MOLECULAR SEQUENCE DATABASE NUMBER: amino acid sequence; molecular sequence; data; nucleotide sequence; DDBJ-D01209; EMBL-D01209; GENBANK-D01209
 MECHANISMS: COMPLEMENTARY DNA; GILL **TISSUE**; MOUSE H16 PILEUS; PILEUS; **RGD** MOTIF; SPREADING ACTIVITY; STIPE; **TISSUE**
 SPECIFIC GENE EXPRESSION

CONCEPT COERS:

12514 Cytology and Cytochemistry-Plant
 12516 Cytology and Cytochemistry-Animal
 13504 Genetics and Cytogenetics-Plant
 19042 Biochemical Studies-Nucleic Acids, Purines and Pyrimidines
 19064 Biochemical Studies-Proteins, Peptides and Amino Acids
 19100 Replication, Transcription, Translation
 19106 Biophysics-Membrane Phenomena
 21510 Plant Physiology, Biochemistry and Biophysics-Reproduction
 21511 Plant Physiology, Biochemistry and Biophysics-Chemical Constituents

BIOSYSTEMATIC CODES:

12514 Basidiomycetes
 21510 Muridae

32/9/5 (Item 5 from file: 5)

DIAL: R:File 1: Biosis Previews(R)
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09061991 BIOSIS NO.: 199598118709

Recombinant Domain III of Perlecan Promotes Cell Attachment through Its RGDS Sequence.

AUTHOR: Chakravarti Shukti; Horchar Teresa; Jefferson Bahiyyah; Laurie Gordon W; Hassell John R(a)
 AUTHOR ADDRESS: (a) Dep. Ophthalmol., Univ. Pittsburgh Sch. Med., Eye Ear Inst., 203 Lothrop St., Pittsburgh, PA 15260-USA
 JOURNAL: Journal of Biological Chemistry 268(41):p4404-4409 1993
 ISSN: 0021-9258
 DOCUMENT TYPE: Article
 RECORD TYPE: Abstract
 LANGUAGE: English

ABSTRACT: Perlecan has been previously shown to support attachment of a wide variety of cells through interactions of its core protein with the cell surface. The core protein domains involved in cell adhesion are, however, unknown. The laminin-like domain III of murine perlecan contains an RGDs sequence and is a likely candidate for supporting integrin-mediated cell attachment. We made a cDNA construct corresponding to domain III and containing an intrate signal peptide at the 5' end as well as an intrate signal peptide at the 3' end by using cDNA clones of perlecan. The construct was inserted into the pCMVCMV vector and transfected into HEK293 cells, and the secreted recombinant domain III, a 3-kDa protein, was purified from the medium. Its size of protein fragment predicted by digestion with 3a protease as well as analysis of the rotary shadowed image of the recombinant protein indicated it was produced in a native conformation. Recombinant domain III coated on tissue culture dishes, supports adhesion of an epithelial-like human primary tumor cell line UMF 362562 in a dose-dependent manner. This interaction was inhibited specifically by the RGDs synthetic peptide and intact perlecan, but not laminin. This domain III RGD-dependent cell attachment activity indicates a role for perlecan in integrin-mediated signaling.

REGISTRY NUMBERS: 153-87-7Q: INTEGRIN; 60791-49-3Q: INTEGRIN

DESCRIPTORS:

MAJOR CONCEPTS: Cell Biology; Genetics; Membranes (Cell Biology); Metabolism

BIOSYSTEMATIC NAMES: Hominidae--Primates, Mammalia, Vertebrata, Chordata, Animalia

ORGANISM: human (Hominidae)

BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA): animals; chordates; humans;

primates; vertebrates

MECHANICAL & BIOCHEMICALS: INTEGRIN

INTRAMOLECULAR TERMS: COMPLEMENTARY DNA ; HT1080 CELL LINE;

INTEGRIN-MEDIATED SIGNALLING; PERLECAN

CONCEPT COHES:

- 111- Cytology and Cytochemistry-Human
- 1112- Genetics and Cytogenetics-Human
- 1113- Morphology-Membrane Phenomena
- 1114- Metabolism-Proteins, Peptides and Amino Acids
- 1115- Metabolism-Nucleic Acids, Purines and Pyrimidines
- 1116- Biochemical Studies-Nucleic Acids, Purines and Pyrimidines
- 1117- Biochemical Studies-Proteins, Peptides and Amino Acids
- 1118- Biochemical Studies-Carbohydrates

BIOSYSTEMATIC CODES:

80115 Hominidae

32/9/6 (Item 1 from file: 155)

DIALOG(R) File 155: MEDLINE(F)

12 0883 1104024 EINH 11447901

Potential tumor-targeting peptide vector of histidylated oligolysine conjugated to a tumor-homing RGD motif.

Yoshiyuki Ito, S. Kaw. H. Miyasawa K.

The Second Department of Internal Medicine, Shinshu University School of Medicine, Matsumoto, Japan. yaoki55@hsp.mn.shinshu-u.ac.jp

Cancer gene therapy [England] Oct 2001; 9 (10) p793-7, ISSN 0950-1213 Journal Code: 9432230

Document type: Journal Article

Language: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Subfile: INDEX MEDICUS

We have developed a potential tumor-targeting peptide vector (cRGD-hK) that is intended to be systemically and repeatedly administered to patients with advanced solid tumors. The peptide vector of 36 L-amino acid residues, TRGDGF([H]-KFF)6, comprises a tumor-homing RGD motif, a DNA-binding oligolysine, and histidyl residues to facilitate the delivery into the cytosol. Using cytomegalovirus-driven luciferase expression plasmids as

In reporter, we tested the transfection efficiency of the cDNA in HepG2 and pancreatic cancer cell lines. Transfection with the cDNA plasmid complexes (molar ratio 400:1) was inhibited by 1. mM bafilomycin A1, an inhibitor of the vacuolar ATPase (acidic proton pump), and by 1. mM cyclosporin D, an integrin α v β 3 antagonist, indicating that the three elements of cDNA could function as expected, at least in vitro. In nude mice bearing tumors created by subcutaneous inoculation, luciferase activity in the tumor tissues 48 hours after the injection of the cDNA-plasmid complexes through the tail vein (microplasma) was significantly higher than that in the lung, kidney, and spleen, but only slightly higher than that in the liver. Although the latter difference was small, we propose a potential nonviral gene therapy for advanced solid tumors through use of the tumor-targeting peptide **vector**.

Tags: Animal; Human; Male; Support, Non-U.S. Gov't

Descriptors: Gene Therapy--methods--MT; *Genetic Vectors; *Histidine; *Liver Neoplasms, Experimental--therapy--TH; *Oligopeptides--genetics--GE; *Pancreatic Neoplasms--therapy--TH; *Polylysine --genetics--GE; Antibiotics, Macrolide--pharmacology--PD; Enzyme Inhibitors--pharmacology--PI; Liver Neoplasms, Experimental--metabolism--ME; Liver Neoplasms, Experimental--pathology--PA; Luciferase--metabolism--ME; Mice; Mice, Inbred BALB/c; Mice, Nude; Oligopeptides--pharmacokinetics--PK; Pancreatic Neoplasms--metabolism--ME; Pancreatic Neoplasms--pathology--PA; Plasmids; Polylysine --pharmacokinetics--PK; Protein-Translocating ATPases --antagonists and inhibitors--AI; Tissue Distribution; Tumor Cells, Cultured

CAS Registry No.: 0 (Antibiotics, Macrolide); 0 (Enzyme Inhibitors); 0 (Genetic Vectors); 0 (Oligopeptides); 0 (Plasmids); 25104-18-1 (Polylysine); 71-00-1 (Histidine); 88899-55-2 (bafilomycin A1); 99-36-31-1 (arginyl-glycyl-aspartic acid)

Enzyme No.: EC 1.1.1.12.- (Luciferase); EC 3.6.3.14 (Protein-Translocating ATPases)

Record Date Created: 20011031

32/9/7 (Item 2 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

08423136 95172398 PMID: 7867945

A fruiting body-specific cDNA, mfbAc, from the mushroom *Lentinus edodes* encodes a high-molecular-weight cell-adhesion protein containing an Arg-Gly-Asp motif.

Funahashi G; Muro A; Kagiwara S; Takagi T; Saito Y; Shishida K
Department of Life Science, Tokyo Institute of Technology, Yokohama, Japan.

Gene NETHERLANDS Feb 27 1996, 154 (1) p31-7, ISSN 0378-1119
Journal Code: 7706761

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Subfile: INDEX MEDICUS

A cDNA clone (designated mfbAc), encoding 2157 amino acids (aa), was isolated from a mature fruiting-body cDNA library of the edible mushroom *Lentinus edodes*. The mfbA transcript was abundant in mature fruiting bodies, detectable in immature fruiting bodies but absent in earlier developmental stages and in the vegetative mycelium. Although more abundant in the pileus than the stipe, only low levels were found in the gill **tissue**. The deduced MFBA protein (234.5 kDa) contained a cell-surface attachment-promoting Arg-Gly-Asp (**RGD**) motif. MFBA was produced in *Escherichia coli* using a maltose-binding protein (MBP) fusion **vector**, but it was cleaved into four fragments even in a protease-deficient host. A 425-aa MFBA peptide containing the **RGD** motif (named MFBA(582-1006) peptide) was successfully produced using the phage T7 expression system. This MFBA(582-1006) peptide exhibited a cell adhesion and spreading activity toward mammalian cells. This activity of the MFBA fragment was competitively inhibited by the Gly-Arg-Gly-Asp-Ser-Pro peptide but not by the Gly-Arg-Gly-Glu-Ser-Pro peptide, showing that the **RGD** motif of MFBA is essential for the cell-binding activity.

II collagen antibody-induced arthritis in mice.

Apr 2 2002

Tags: Animal; Support, Non-U.S. Gov't; Support, U.S. Gov't, P.H.S.

Descriptors: *Arthritis--pathology--PA; *Cartilage, Articular--pathology--PA; *Collagen, Type II--immunology--IM; *Glycoproteins--physiology--PH; Apoptosis; Arthritis--metabolism--ME; Chondrocytes--pathology--PA; Lipopolysaccharides--pharmacology--PD; Mice; Mice, Inbred C57BL; Neovascularization, Pathologic--prevention and control--PC; Sialoglycoproteins--deficiency--DF; Tumor Necrosis Factor--biosynthesis--BI

CAS Registry No.: 0 (Collagen Type II); 0 (Lipopolysaccharides); 0 (Sialoglycoproteins); 1 (Tumor Necrosis Factor); 106441-73-1 (osteopontin)

17/8/41 (Item 6 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

1311331 2141772 PMID: 11920637

alpha v-Integrin antagonist EMD 121974 induces apoptosis in brain tumor cells growing on vitronectin and tenascin.

Apr 15 2002

Tags: Animal; Human; Support, Non-U.S. Gov't; Support, U.S. Gov't, P.H.S.
Descriptors: *Apoptosis--drug effects--DE; *Brain Neoplasms--pathology--PA; *Glioblastoma--pathology--PA; *Integrins--antagonists and inhibitors--AI; *Medulloblastoma--pathology--PA; *Peptides, Cyclic--pharmacology--PD; *Receptors, Vitronectin--antagonists and inhibitors--AI; Brain Neoplasms--metabolism--ME; Cell Adhesion--drug effects--DE; Cell Division--drug effects--DE; Collagen--metabolism--ME; Flow Cytometry; Fluorescent Antibody Technique; Glioblastoma--metabolism--ME; Immunoassay Techniques; In Situ Nick-End Labeling; Integrins--metabolism--ME; Medulloblastoma--metabolism--ME; Mice; Mice, Nude; Receptors, Vitronectin--metabolism--ME; Tenascin--metabolism--ME; Tumor Cells, Cultured--drug effects--DE; Tumor Cells, Cultured--metabolism--ME; Tumor Cells, Cultured--pathology--PA; Vitronectin--metabolism--ME

CAS Registry No.: 0 (EMD 121974); 0 (Integrins); 0 (Peptides, Cyclic); 0 (Receptors, Vitronectin); 0 (Tenascin); 0 (Vitronectin); 0 (Integrin alphaVbeta5); 9107-94-5 (Collagen)

17/8/42 (Item 7 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

13910034 21652405 PMID: 11792138

Preparation and functional evaluation of RGD -modified proteins as alpha(v)beta(3) integrin directed therapeutics.

Jan-Feb 2002

Tags: Human

Descriptors: **Angiogenesis** Inhibitors--chemical synthesis--CS; ***Angiogenesis** Inhibitors--pharmacology--PD; *Oligopeptides--chemistry--CH; *Proteins--chemistry--CH; *Proteins--pharmacology--PD; *Receptors, Vitronectin--drug effects--DE; Cell Adhesion--drug effects--DE; Chromatography, Gel; Electrophoresis, Polyacrylamide Gel; Endothelium, Vascular--drug effects--DE; Endothelium, Vascular--metabolism--ME; Immunoglobulin G--chemistry--CH; Peptides--chemistry--CH

CAS Registry No.: 0 (Angiogenesis Inhibitors); 0 (Immunoglobulin G); 0 (Oligopeptides); 0 (Peptides); 0 (Proteins); 0 (Receptors, Vitronectin); 99894-85-0 (carboxyl-glycyl-aspartic acid)

17/8/43 (Item 8 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

12997548 21863658 PMID: 11675744

Inhibition of the alpha-v integrins with a cyclic RGD peptide impairs angiogenesis, growth and metastasis of solid tumours in vivo.

Mar 4 2002

Tags: Animal; Male

Descriptors: *Antigens, CD--pharmacology--PD; *Antineoplastic Agents

--pharmacology--PD; *Melanoma--pathology--PA; *Neovascularization,
Pathologic; *Oligopeptides--pharmacology--PD; *Skin Neoplasms--pathology
--PA; Endothelium--cytology--CY; Endothelium--pathology--PA; Hamsters;
Infusions, Parenteral; Leukocytes--immunology--IM; Microcirculation;
Neoplasm Metastasis; Neoplasms, Experimental
CAS Registry No.: 0 (Antigens, CD); 0 (Antineoplastic Agents;
Oligopeptides); 0 (Integrin, alpha5 beta1); 0 (Arginyl-glycyl-aspartic
acid)

17/8/44 (Item 9 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

12951115 21637355 PMID: 11779085

Integrins as targets of angiogenesis inhibition.

Nov-Dec 2001

Tags: Animal; Human

Descriptors: **Angiogenesis** Inhibitors--therapeutic use--TU;
*Antineoplastic Agents--therapeutic use--TU; *Receptors, Vitronectin
--antagonists and inhibitors--AI; Drug Design; Neovascularization,
Pathologic--metabolism--ME; Neovascularization, Pathologic--pathology--PA;
Oligopeptides--antagonists and inhibitors--AI

CAS Registry No.: 0 (Angiogenesis Inhibitors); 0 (Antineoplastic
Agents); 0 (Oligopeptides); 0 (Receptors, Vitronectin); 99896-85-2
(Arginyl-glycyl-aspartic acid)

17/8/45 (Item 10 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

13901415 21581215 PMID: 11723742

**Inhibition of hepatic metastasis in mice treated with cell-binding domain
of human fibronectin and angiogenesis inhibitor TNP-470.**

Oct 2001

Tags: Animal; Male; Support, Non-U.S. Gov't

Descriptors: **Angiogenesis** Inhibitors--therapeutic use--TU; *Colorectal
Neoplasms; *Fibronectins--chemistry--CH; *Liver Neoplasms--prevention and
control--PC; *Liver Neoplasms--secondary--SC; *Oligopeptides--therapeutic
use--TU; *Sesquiterpenes--therapeutic use--TU; Disease Models, Animal; Mice
; Tumor Cells, Cultured

CAS Registry No.: 0 (Angiogenesis Inhibitors); 0 (Fibronectins); 0
(Oligopeptides); 0 (Sesquiterpenes); 129298-91-5 (O-(chloroacetylcarbam-
oyl)fumagillol)

17/8/46 (Item 11 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

13916016 21648243 PMID: 11738463

**Shear stress-induced endothelial cell migration involves integrin
signaling via the fibronectin receptor subunits alpha(5) and beta(1).**

Jan 2002

Tags: Human; Support, Non-U.S. Gov't

Descriptors: *1-Phosphatidylinositol 3-Kinase--metabolism--ME; *Cell
Movement--physiology--PH; *Endothelium, Vascular--physiology--PH; *Hemorhe-
ology; *Mitogen-Activated Protein Kinases--metabolism--ME; *Protein-Tyrosine
Kinase--metabolism--ME; *Receptors, Fibronectin--physiology--PH; *Receptors
, Vitronectin--physiology--PH; Cells, Cultured; Endothelium, Vascular
--cytology--CY; Phosphorylation; Signal Transduction; Umbilical Veins
--cytology--CY; Up-Regulation

CAS Registry No.: 0 (Receptors, Fibronectin); 0 (Receptors,
Vitronectin)

Enzyme No.: EC 2.7.1.- (Mitogen-Activated Protein Kinases); EC 2.7.1.-
(endogenous substrate pp120); EC 2.7.1.112 (Protein-Tyrosine Kinase); EC
2.7.1.137 (1-Phosphatidylinositol 3-Kinase)

17/8/47 (Item 12 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

12150057 21617165 PMID: 11741353

Domain IVa of laminin alpha5 chain is cell-adhesive and binds beta1 and alphaVbeta3 integrins through Arg-Gly-Asp.

Dec 7 2001

Tags: Animal; Human; Support, Non-U.S. Gov't

Descriptors: *Antigens, CD29--metabolism--ME; *Cell Adhesion Molecules--metabolism--ME; *Laminin--metabolism--ME; *Oligopeptides--metabolism--ME; *Receptors, Vitronectin--metabolism--ME; Binding Sites; Cell Adhesion; Cell Adhesion Molecules--genetics--GE; Cell Adhesion Molecules--isolation and purification--IP; Kidney--cytology--CY; Laminin--genetics--GE; Laminin--isolation and purification--IP; Melanoma, Experimental; Mice; Muscle, Skeletal--cytology--CY; Peptide Fragments--genetics--GE; Peptide Fragments--isolation and purification--IP; Peptide Fragments--metabolism--ME; Protein Structure, Tertiary; Recombinant Proteins--metabolism--ME

CAS Registry No.: 0 (Antigens, CD29); 0 (Cell Adhesion Molecules); 0 (Laminin); 0 (Oligopeptides); 0 (Peptide Fragments); 0 (Receptors, Vitronectin); 0 (Recombinant Proteins); 0 (Laminin alpha5); 99996-34-2 (arginyl-glycyl-aspartic acid)

17/8/48 (Item 13 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

12636317 21571126 PMID: 11714389

Suppression of murine collagen-induced arthritis by targeted apoptosis of synovial neovasculature.

2001

Tags: Animal; Male; Support, Non-U.S. Gov't; Support, U.S. Gov't, P.H.S.

Descriptors: *Apoptosis; *Arthritis, Experimental--therapy--TH; *Gene Therapy--methods--MT; *Neovascularization, Pathologic--therapy--TH; *Oligopeptides--pharmacology--PD; *Synovial Membrane--blood supply--BS; Arthritis, Experimental--immunology--IM; Arthritis, Experimental--pathology--PA; Bacteriophage M13--genetics--GE; Binding, Competitive; Collagen; Drug Delivery Systems--methods--MT; In Situ Nick-End Labeling; Integrins--metabolism--ME; Mice; Mice, Inbred DBA; Neovascularization, Pathologic--pathology--PA; Peptide Fragments--pharmacology--PD; Receptors, Vitronectin--metabolism--ME; Synovial Membrane--immunology--IM

CAS Registry No.: 0 (Integrins); 0 (Oligopeptides); 0 (Peptide Fragments); 0 (Receptors, Vitronectin); 0 (Integrin alphaVbeta3); 9107-34-8 (Collagen); 99996-35-2 (arginyl-glycyl-aspartic acid)

17/8/49 (Item 14 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

12587648 21534274 PMID: 11676501

A novel synthetic Arg-Gly-Asp-containing peptide cyclo(-RGDf==V-) is the potent inhibitor of angiogenesis.

Nov 2 2001

Tags: Animal; Human; Male; Support, Non-U.S. Gov't

Descriptors: *Endothelium, Vascular--drug effects--DE; *Neovascularization, Pathologic--pathology--PA; *Oligopeptides--pharmacology--PD; *Peptides, Cyclic--pharmacology--PD; Binding Sites; Cells, Cultured; Disease Models, Animal; Endothelium, Vascular--physiology--PH; Mice; Mice, Inbred BALB C; Mice, Nude; Neoplasm Transplantation; Neoplasms, Experimental--drug therapy--DT; Neovascularization, Pathologic--drug therapy--DT; Oligopeptides--therapeutic use--TU; Peptides, Cyclic--therapeutic use--TU

CAS Registry No.: 0 (Oligopeptides); 0 (Peptides, Cyclic); 9107-34-8 (arginyl-glycyl-aspartic acid)

17/8/50 (Item 15 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

12512267 21333332 PMID: 11440275

Topical application of integrin antagonists inhibits proliferative

retinopathy.

May 2001

Tags: Animal; Support, Non-U.S. Gov't

Descriptors: *Diabetic Retinopathy--drug therapy--IT; *Oligopeptides--therapeutic use--TI; *Receptors, Vitronectin--antagonists and inhibitors--AI; Adhesiveness; Administration, Topical; Anoxia--pathology--IA; Mice; Mice, Inbred C57BL; Neovascularization, Pathologic--drug therapy--IT; Neovascularization, Pathologic--pathology--IA; Oligopeptides--administration and dosage--AD; Oligopeptides--metabolism--ME; Ophthalmic Solutions; Retina--metabolism--ME

CAS Registry No.: 0 (Oligopeptides); 0 (Ophthalmic Solutions); 0 (Receptors, Vitronectin); 99196-85-1 (Arginyl-glycyl-aspartic acid)

17/8/51 (Item 16 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

1133446 21402194 PMID: 11399763

Extracellular matrix-derived peptide binds to alpha(v)beta(3) integrin and inhibits angiogenesis .

Aug 1 2001

Tags: Animal; Female; Human; Support, Non-U.S. Gov't; Support, U.S. Gov't, P.H.S.

Descriptors: *Autoantigens--metabolism--ME; *Collagen--metabolism--ME; *Extracellular Matrix Proteins--metabolism--ME; *Neovascularization, Pathologic; *Neovascularization, Physiologic; *Receptors, Vitronectin--metabolism--ME; Alkylation; Amino Acid Sequence; Apoptosis--drug effects--DE; Autoantigens--chemistry--CH; Autoantigens--pharmacology--PD; Caspases--metabolism--ME; Cattle; Cell Cycle--drug effects--DE; Cell Division--drug effects--DE; Cells, Cultured; Collagen--chemistry--CH; Collagen--pharmacology--PD; Disulfides--metabolism--ME; Endothelium, Vascular--cytology--CY; Endothelium, Vascular--drug effects--DE; Enzyme Activation; Extracellular Matrix Proteins--chemistry--CH; Mice; Mice, Inbred C57BL; Molecular Sequence Data; Oxidation-Reduction; Protein Binding; Recombinant Proteins--chemistry--CH; Recombinant Proteins--metabolism--ME; Recombinant Proteins--pharmacology--PD; Tumor Cells, Cultured; Vitronectin--metabolism--ME

CAS Registry No.: 0 (Autoantigens); 0 (Disulfides); 0 (Extracellular Matrix Proteins); 0 (Goldpasteur antigen); 0 (Receptors, Vitronectin); 0 (Recombinant Proteins); 0 (Vitronectin); 9007-34-5 (Collagen)

Enzyme No.: EC 3.4.12.- (CPP32 protein); EC 3.4.22.- (Caspases)

17/8/52 (Item 17 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

1140147 21353555 PMID: 11461496

Role of fibrin matrix in angiogenesis .

2001

Tags: Animal; Human

Descriptors: *Fibrin--physiology--PH; *Neovascularization, Physiologic--physiology--PH

CAS Registry No.: 9101-31-4 (Fibrin)

17/8/53 (Item 18 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

1140615 21325999 PMID: 11433393

Thiolutin, an inhibitor of HUVEC adhesion to vitronectin, reduces paxillin in HUVECs and suppresses tumor cell-induced angiogenesis .

Aug 1 2001

Tag : Animal; Female; Human

Descriptors: *Antibiotics, Antifungal--pharmacology--PD; *Cell Adhesion Molecules--metabolism--ME; *Cytoskeletal Proteins--metabolism--ME; *Endothelium, Vascular--metabolism--ME; *Neovascularization, Pathologic--prevention and control--PC; *Phosphoproteins--metabolism--ME; *Pyrrolidinones--pharmacology--PD; *Vitronectin--metabolism--ME; Antibiotic

g, Antifungal--isolation and purification--IP; Blotting, Western; Cell Adhesion--drug effects--DE; Dose-Response Relationship, Drug; Down-Regulation; Immunoblotting; Mice; Mice, Inbred ICR; Peptides --pharmacology--PD; Platelet Aggregation Inhibitors--pharmacology--PH; Precipitation Tests; Pyrrolidines--isolation and purification--IP; Receptors, Vitronectin--metabolism--ME; Tumor Cells, Cultured--drug effects--DE; Unlabeled Veins; Vitronectin--antagonists and inhibitors--AI

CAS Registry No.: 0 (Antibiotics, Antitumor); 0 (Cell Adhesion Molecules); 0 (Cytoskeletal Proteins); 0 (Peptides); 0 (Phosphoproteins); 0 (Platelet Aggregation Inhibitors); 0 (Pyrrolidines); 0 (Receptors, Vitronectin); 0 (Vitronectin); 0 (Taxillin); 11437-11-1 (Ephedrine); 11-11-1 (and pyrrolidine)

17/8/54 (Item 19 from file: 155)
DIALOG(R) File 155:MEDLINE(R)

11348950 21290163 PMID: 11387236

An angiogenic laminin site and its antagonist bind through the alpha(v)beta3 and alpha5beta1 integrins.

Jun 2001

Tags: Animal

Descriptors: *Integrins--metabolism--ME; *Laminin--metabolism--ME; *Neovascularization, Physiologic--physiology--PH; *Receptors, Laminin--metabolism--ME; *Receptors, Vitronectin--metabolism--ME; Amino Acid Sequence; Aorta--growth and development--GD; Binding Sites; Cell Adhesion; Chick Embryo; Fibroblast Growth Factor 2--antagonists and inhibitors--AI; Integrins--immunology--IM; Laminin--antagonists and inhibitors--AI; Mitogen-Activated Protein Kinases--metabolism--ME; Molecular Sequence Data; Peptide Fragments--antagonists and inhibitors--AI; Peptide Fragments--metabolism--ME; Protein Binding; Rats; Receptors, Laminin--immunology--IM; Receptors, Vitronectin--immunology--IM

CAS Registry No.: 0 (Integrins); 0 (Laminin); 0 (Peptide Fragments); 0 (Receptors, Laminin); 0 (Receptors, Vitronectin); 0 (Integrin alpha5beta1); 0 (Laminin 1); 103107-01-3 (Fibroblast Growth Factor 2)
Erythrae No.: EC 2.7.1.- (Mitogen-Activated Protein Kinases)

17/8/55 (Item 20 from file: 155)
DIALOG(R) File 155:MEDLINE(R)

11325741 11349416 PMID: 11352090

Spinal cord repair with PHPMA hydrogel containing RGD peptides (NeuroGel).

May 2001

Tags: Animal; Female

Descriptors: *Biocompatible Materials; *Polymethacrylic Acids; *Spinal Cord Injuries--therapy--TH; Animals, Newborn; Biocompatible Materials--chemistry--CH; Hydrogels; Materials Testing; Microscopy, Electron; Microscopy, Electron, Scanning; Nerve Regeneration; Oligopeptides; Polymethacrylic Acids--chemistry--CH; Rats; Rats, Sprague-Dawley; Spinal Cord Injuries--pathology--PA; Spinal Cord Injuries--physiopathology--PP

CAS Registry No.: 0 (Biocompatible Materials); 0 (Hydrogels); 0 (Oligopeptides); 0 (Polymethacrylic Acids); 40704-75-4 (Duxon); 99-96-85-2 (arginyl-glycyl-aspartic acid)

17/8/56 (Item 21 from file: 155)
DIALOG(R) File 155:MEDLINE(R)

11305594 11226771 PMID: 11278365

Identification of the anti-angiogenic site within vascular basement membrane-derived tumstatin.

May 4 2001

Tags: Animal; Human; Support, Non-U.S. Gov't; Support, U.S. Gov't, P.H.S.

Descriptors: Angiogenesis Inhibitors--chemistry--CH; *Autoantigens--chemistry--CH; *Collagen--chemistry--CH; *Endothelium, Vascular--chemistry--CH; Angiogenesis Inhibitors--isolation and purification--IP;

Autoantigens--genetics--GE; Autoantigens--isolation and purification--GE; Basement Membrane--chemistry--CH; Caspases--metabolism--ME; Cell Division; Cell Line; Collagen--genetics--GE; Collagen--isolation and purification--IP; Endothelium, Vascular--cytology--CY; Endothelium, Vascular--metabolism--ME; Mice; Recombinant Proteins--chemistry--CH; Recombinant Proteins--genetics--GE
CAS Registry No.: 0 (Angiogenesis Inhibitors); 0 (Autoantigens); 0 (Goodpasture antigen); 0 (Recombinant Proteins); 9007-34-5 (Collagen)
Enzyme No.: EC 3.4.22.- (CPP32 protein); EC 3.4.22.- (Caspases)

17/8/57 (Item 22 from file: 155)

DIAGNOSTIC File 155:MEILINE(R)

1115134 1114991 PMID: 1114722

Noninvasive imaging of alpha(v)beta3 integrin expression using 18F-labeled RGD-containing glycopeptide and positron emission tomography.
Mar 1 2001

Tags: Animal; Female; Human; Support, Non-U.S. Gov't

Descriptors: *DNA-Binding Proteins--genetics--GE; *Fluorine Radioisotopes--diagnostic use--DU; *Neoplasms, Experimental--radionuclide imaging--RI; *Radiopharmaceuticals--diagnostic use--DU; *Receptors, Vitronectin--metabolism--ME; *Transcription Factors--genetics--GE; *Tumor Markers, Biological--metabolism--ME; Azides--chemistry--CH; DNA-Binding Proteins--immunology--IM; Fibrinogen--metabolism--ME; Isotope Labeling; Melanoma--metabolism--ME; Melanoma--radionuclide imaging--RI; Mice; Mice, Inbred BALB C; Mice, Nude; Neoplasm Transplantation; Neoplasms, Experimental--metabolism--ME; Osteosarcoma--metabolism--ME; Osteosarcoma--radionuclide imaging--RI; Peptides, Cyclic--chemistry--CH; Peptides, Cyclic--pharmacology--PH; Radiopharmaceuticals--chemical synthesis--CS; Radiopharmaceuticals--pharmacokinetics--PK; Receptors, Vitronectin--antagonists and inhibitors--AI; Tissue Distribution; Tomography, Emission-Computed; Transcription Factors--immunology--IM; Transplantation, Heterologous; Tumor Markers, Biological--antagonists and inhibitors--AI; Vitronectin--metabolism--ME

CAS Registry No.: 0 (Azides); 0 (DNA-Binding Proteins); 0 (Fluorine Radioisotopes); 0 (NY-BR-1 protein); 0 (Peptides, Cyclic); 0 (Radiopharmaceuticals); 0 (Receptors, Vitronectin); 0 (Transcription Factors); 0 (Tumor Markers, Biological); 0 (Vitronectin); 0 (cyclic (arginyl-glycyl-aspartyl-phenylalanyl-lysyl)); 0 (cyclic(arginyl-glycyl-aspartyl-phenylalanyl-valyl)); 178181-33-4 (4-nitrophenyl 2-fluoropropionate); 9001-32-5 (Fibrinogen)

17/8/58 (Item 23 from file: 155)

DIAGNOSTIC File 155:MEILINE(R)

11139998 31093534 PMID: 11159525

Aberrant fibrin formation and cross-linking of fibrinogen Nieuwegein, a variant with a shortened Aalpha-chain, alters endothelial capillary tube formation.

Feb 15 2001

Tags: Case Report; Human; Male

Descriptors: *Afibrinogenemia--genetics--GE; *Capillaries--pathology--PA; *Endothelium, Vascular--ultrastructure--UL; *Fibrin--ultrastructure--UL; *Fibrinogens, Abnormal--chemistry--CH; *Mutagenesis, Insertional; *Neovascularization, Physiologic--genetics--GE; Adult; Afibrinogenemia--pathology--PA; Biopolymers; Cells, Cultured; Codon, Terminator; Exons--genetics--GE; Fibrin--biosynthesis--BI; Fibrin--chemistry--CH; Fibrinogens, Abnormal--genetics--GE; Microscopy, Electron; Molecular Weight; Oligopeptides--physiology--PH; Partial Thromboplastin Time; Receptors, Vitronectin--immunology--IM; Receptors, Vitronectin--physiology--PH; Sequence Deletion; Structure-Activity Relationship; Transglutaminases--metabolism--ME

CAS Registry No.: 0 (Biopolymers); 0 (Codon, Terminator); 0 (Fibrinogens, Abnormal); 0 (Oligopeptides); 0 (Receptors, Vitronectin); 0 (fibrinogen Nieuwegein); 9001-31-4 (Fibrin); 99996-45-2 (arginyl-glycyl-aspartic acid)

17/8/59 (Item 24 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

11086295 21084280 PMID: 11216533

Glycosylated RGD -containing peptides: tracer for tumor targeting and angiogenesis imaging with improved biokinetics.
Feb 2001

Tags: Animal; Human; Support, Non-U.S. Gov't
Descriptors: *Melanoma, Experimental--radionuclide imaging--PK; *Neovascularization, Pathologic--radionuclide imaging--PK; *Oligopeptides--diagnostic use--DU; *Osteosarcoma--radionuclide imaging--PK; Extracellular Matrix Proteins--metabolism--ME; Glycosylation; Integrins--metabolism--ME; Iodine Radioisotopes--diagnostic use--DU; Melanoma, Experimental--metabolism--ME; Mice; Mice, Inbred BALB C; Mice, Nude; Neoplasm Transplantation; Oligopeptides--chemical synthesis--CS; Oligopeptides--pharmacokinetics--PK; Osteosarcoma--blood supply--BS; Osteosarcoma--metabolism--ME; Receptors, Vitronectin--metabolism--ME
CAS Registry No.: 0 (Extracellular Matrix Proteins); 0 (Integrins); 0 (Iodine Radioisotopes); 0 (Oligopeptides); 0 (Receptors, Vitronectin); 92396-81-2 arnityl-glycyl-aspartic acid

17/8/60 (Item 1 from file: 172)
DIALOG(R)File 172:(c) 2002 Elsevier Science B.V. All rts. reserv.

0267901c EMBASE No: 2002337222

Plasmin-induced migration of endothelial cells: A potential target for the anti- angiogenic action of angiostatin
2002

17/8/61 (Item 2 from file: 172)
DIALOG(R)File 172:(c) 2002 Elsevier Science B.V. All rts. reserv.

0262560 EMBASE No: 2002279982

Ligand-targeted liposomes directed against pathological vasculature
2002
AUTHOR KEYWORDS: Angiogenesis ; Integrins; RGD -peptide; Drug targeting ; Liposomes

17/8/62 (Item 3 from file: 172)
DIALOG(R)File 172:(c) 2002 Elsevier Science B.V. All rts. reserv.

0261437 EMBASE No: 2002269709

Ligands to the integrin receptor alphaSUBvbetaSUB3
2002
AUTHOR KEYWORDS: alphaSUBvbetaSUB3 integrin; Angiogenesis ; Arthritis; Bone resorption; Osteoclast; Osteoporosis; Vitronectin receptor

17/8/63 (Item 4 from file: 172)
DIALOG(R)File 172:(c) 2002 Elsevier Science B.V. All rts. reserv.

02128416 EMBASE No: 2002230789

Thiolutin, an inhibitor of huvec adhesion to vitronectin, reduces paxillin in huvecs and suppresses tumor cell-induced angiogenesis
2001
AUTHOR KEYWORDS: Thiolutin; Paxillin; HUVEC; Vitronectin; Tumor angiogenesis

?s s17 and ser or thr or cys) and (asn or gln)

63 S17
34718 SER
21433 THR
21499 CYS

15121 ASN
13769 GLN
S13 1 SER AND (SER OR THR OR CYS) AND (ASN OR GLN)
?s antigen? and ("ser asn ser" or "ser gln ser")
368. ANGIOGEN?
SER ASN SER
SER THR SER
S14 ANGIOGEN? AND ("SER ASN SER" OR "SER THR SER")
?s antigen? and ("ser-asp-ser" or "ser-gln-ser")
368. ANGIOGEN?
SER-ASN-SER
SER-GLN-SER
S21 ANGIOGEN? AND ("SER-ASN-SER" OR "SER-GLN-SER")
?s antigen? and ("sns" or "sqz")
368. ANGIOGEN?
SNS
SQS
S21 ANGIOGEN? AND ("SNS" OR "SQS")
?type s21/full/all

21/9/1 (Item 1 from file: 5)
DIALOG(F)File 5: Biosis Previews(R)
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1204000 BIOSIS NR.: 20000311508

Generation of expression plasmids for angiostatin, endostatin and TIMP-2 for cancer gene therapy.

AUTHOR: Indracoilo S(a.; Minuzzo S; Gola E; Habeler W; Carrozzino F; Noonan E; Alkini A; Sant L; Anadori A; Chieco-Bianchi L

AUTHOR ADDRESS: (a) Dipartimento di Oncologia e Scienze Chirurgiche, Università di Padova, Via Giustiniana, 64, 35128, Padova**Italy

JOURNAL: International Journal of Biological Markers 14 (4):p251-256

Oct.-Dec., 1999

ISSN: 0393-6155

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

SUMMARY LANGUAGE: English

ABSTRACT: Antiangiogenic therapy may represent a promising approach to cancer treatment. Indeed, the efficacy of endogenous **angiogenesis** inhibitors, including angiostatin, endostatin and TIMPs, has been demonstrated in many types of solid tumors in animal models. In view of the possible problems associated with long-term administration of inhibitors as recombinant proteins, we propose their delivery as nucleic acids through a gene therapy approach. To this end, eukaryotic expression constructs for murine angiostatin and endostatin as well as human TIMP-2 were generated, and characterized in vitro. All constructs carry the relevant cDNAs under the control of the strong HCMV promoter/enhancer, and cleavable leader signals to allow protein secretion. Expression of the **angiogenesis** inhibitors was detected by in vitro transcription/translation experiments as well as transfection of 293T cells, followed by Western blotting WB or radioimmunoprecipitation analysis of both cell lysates and supernatants (SNS). These constructs might be used for in vivo intramuscular delivery of plasmid DNA and as a set of reagents for the development of retroviral as well as adenovirus-associated viral (AAV) vectors expressing **angiogenesis** inhibitors.

DESCRIPTORS:

MAJOR CONCEPTS: Cardiovascular Medicine (Human Medicine, Medical

Sciences); Oncology (Human Medicine, Medical Sciences); Pharmacology

BIOSYSTEMATIC NAMES: Hominidae--Primates, Mammalia, Vertebrata, Chordata,

Animalia; Parvoviridae--Animal Viruses, Viruses, Microorganisms;

Retroviridae--Animal Viruses, Viruses, Microorganisms

ORGANISMS: Adeno-associated virus (Parvoviridae)--gene vector; human

Hominidae; retrovirus (Retroviridae)--gene vector

BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA): Animal Viruses; Animals;

Chordates; Humans; Animals; Microorganisms; Bacteria; Viruses

CHEMICALS & BIOCHEMICALS: TIMP-2; angiostatin; endostatin; expression plasmids

METHODS & EQUIPMENT: cancer gene therapy--gene therapy method

MISCELLANEOUS TERMS: tumor **angiogenesis**

CONCEPT CODES:

24013 Neoplasms and Neoplastic Agents--Therapeutic Agents; Therapy

33513 Genetics and Cytogenetics--Human

15564 Biochemical Studies--Proteins, Peptides and Amino Acids

12513 Pathology, General and Miscellaneous--Therapy (1991-)

21513 Genetics of Bacteria and Viruses

14513 Cardiovascular System--Heart--Pathology

25513 Pharmacology--Genetics--Molecular System

BIOSYSTEMATIC CODES:

22513 Parvoviridae (1993-)

02623 Retroviridae (1993-)

46215 Hominidae

21/9/2 (Item 1 from file: 155)

DIALOG(R) File 155: MEDLINE(R)

10593535 .0134351 PMID: 10569955

Generation of expression plasmids for angiostatin, endostatin and TIMP-2 for cancer gene therapy.

Indraccolo S; Minuzzo S; Gola E; Habeler W; Carrozzino F; Noonan D; Albini A; Santi L; Amadori A; Chiocco-Bianchi L

ISI-Biotechnology Section, Padova, Italy. indra@ux1.unipd.it

International journal of biological markers (ITALY) Oct-Dec 1999, 14

14 p251-., ISSN 0393-6155 Journal Code: 8712411

Document type: Journal Article

Language: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Subfile: INDEX MEDICUS

Angiogenesis therapy may represent a promising approach to cancer treatment. Indeed, the efficacy of endogenous **angiogenesis** inhibitors, including angiostatin, endostatin and TIMPs, has been demonstrated in many types of solid tumors in animal models. In view of the possible problems associated with long-term administration of inhibitors as recombinant proteins, we propose their delivery as nucleic acids through a gene therapy approach. To this end, eukaryotic expression constructs for murine angiostatin and endostatin as well as human TIMP-2 were generated, and characterized in vitro. All constructs carry the relevant cDNAs under the control of the strong HCMV promoter/enhancer, and cleavable leader signals to allow protein secretion. Expression of the **angiogenesis** inhibitors was detected by in vitro transcription/translation experiments as well as transfection of 293T cells, followed by Western blotting (WB) or radioimmuno-precipitation analysis of both cell lysates and supernatants (SNs). These constructs might be used for in vivo intramuscular delivery of plasmid DNA and as a set of reagents for the development of retroviral as well as adeno-associated viral (AAV) vectors expressing **angiogenesis** inhibitors.

Text: Human; Support, Non-U.S. Gov't

Descriptors: **Angiogenesis** Inhibitors--genetics--TH; *Collagen--genetics--GE; *Gene Therapy; *Neoplasms--therapy--TH; *Peptide Fragments--genetics--GE; *Plasmids; *Plasminogen--genetics--GE; *Tissue Inhibitor-of-Metalloproteinase-2--genetics--GE; Transfection

CAS Registry No.: [] (Angiogenesis Inhibitors); 0 [] (Peptide Fragments); 0 [] (Plasmids); [] (endostatin); 127497-59-0 [] (Tissue Inhibitor-of-Metalloproteinase-2); 86090-08-6 (angiostatin); 9001-91-6 (Plasminogen); 9007-34-5 (Collagen)

Record Date Created: 20000224

?s angiogen? and rpg and vector or dna or rna?

368177 ANGIOGEN?

100 RDG

149113 VECTOR

132 11A
132 11A
S22 5 ANGIOGEN? AND RGD AND VECTOR OR DNA OR RNA

His

Items 100-114
S1 29 AU='SHUEY S' OR AU='SHUEY S A' OR AU='SHUEY S F' OR AU='SHUEY STEVE' OR AU='SHUEY STEVEN W'
S2 196 AU='MOUSA CHAKER' OR AU='MOUSA CHAKER A' OR AU='MOUSA CHAKER ER AHMED'
S3 5639501 1 OR S2
S4 225 S1 OR S2
S5 0 S4 AND ANGIOGEN?
S6 40 S4 AND ANGIOGEN?
S7 0 CSLEF AND WEBBER AND RENDU
S8 0 "OSIFER-WEBBER-RENDU"
S9 100 EARTHIELLOSIS
S10 1 S9 AND ANGIOGEN?
S11 572 0 GSKGIC
S12 1 S4 AND S11
S13 2418 12 AND ANGIOGEN?
S14 1 S12 AND ANGIOGEN?
S15 310 S12
S16 100 S15 AND ANGIOGEN?
S17 0 S16 AND PYD100
S18 0 S17 AND (SER OR THR OR CYS) AND (ASN OR GLN)
S19 0 ANGIOGEN? AND ("SER ASN SER" OR "SER GLN SER")
S20 1 ANGIOGEN? AND ("SER-ASN-SER" OR "SER-GLN-SER")
S21 1 ANGIOGEN? AND ("SNS" OR "SQS")
S22 1 ANGIOGEN? AND RGD AND (VECTOR OR DNA OR RNA)

Is s15 and vector

1198 S15

14413 VECTOR

S23 178 S15 AND VECTOR

Is s15 and (dna or rna)

5198 S15

1326007 DNA

75277 RNA

S24 701 S15 AND (DNA OR RNA)

Is s23 and s24

178 S23

701 S24

S25 54 S23 AND S24

Is s25 and (tissue or tissues)

54 S25

1210715 TISSUE

456430 TISSUES

S26 7 S25 AND (TISSUE OR TISSUES)

?type s26/free/all

>>>'YPW' not recognized as set or accession number

?type s26/free/all

26/8/1 (Item 1 from file: 5)

13329828 BIOSIS NO.: 200100536977

Potential tumor-targeting peptide vector of histidylated oligolysine conjugated to a tumor-homing RGD motif.

2001

26/8/2 (Item 2 from file: 5)

12249714 BIOSIS NO.: 200000003216

Structural characterization of mouse CD97 and study of its specific interaction with the murine decay-accelerating factor (DAF, CD55).

1999

26/8/3 (Item 3 from file: 5)

11192527 BIOSIS NO.: 199799813672

Increased in vitro and in vivo gene transfer by adenovirus vectors containing chimeric fiber proteins.

1995

26/8/4 (Item 4 from file: 5)

09765794 BIOSIS NO.: 19950228012

A fruiting body-specific cDNA, mfbAc, from the mushroom *Lentinus edodes* encodes a high-molecular-weight cell-adhesion protein containing an Arg-Gly-Asp motif.

1995

26/8/5 (Item 5 from file: 5)

09653791 BIOSIS NO.: 199508118709

Recombinant Domain III of Perlecan Promotes Cell Attachment through Its RGDS Sequence.

1995

26/8/6 (Item 1 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

12738373 21543326 PMID: 11687901

Potential tumor-targeting peptide vector of histidylated oligolysine conjugated to a tumor-homing RGD motif.

Oct 1991

Tags: Animal; Human; Male; Support, Non-U.S. Gov't

Descriptors: *Gene Therapy--methods--MT; *Genetic Vectors; *Histidine; *Liver Neoplasms, Experimental--therapy--TH; *Oligopeptides--genetics--GE; *Pancreatic Neoplasms--therapy--TH; *Polylysine--genetics--GE; Antibiotics, Macrolide--pharmacology--PL; Enzyme Inhibitors--pharmacology--PD; Liver Neoplasms, Experimental--metabolism--ME; Liver Neoplasms, Experimental--pathology--PA; Luciferase--metabolism--ME; Mice; Mice, Inbred BALB C; Mice, Nude; Oligopeptides--pharmacokinetics--PK; Pancreatic Neoplasms--metabolism--ME; Pancreatic Neoplasms--pathology--PA; Plasmids; Polylysine--pharmacokinetics--PK; Proton-Translocating ATPases--antagonists and inhibitors--AI; Tissue Distribution; Tumor Cells, Cultured

CAS Registry No.: 0 (Antibiotics, Macrolide); 0 (Enzyme Inhibitors); 0 (Genetic Vectors); 0 (Oligopeptides); 0 (Plasmids); 25104-19-1 (Polylysine); 71-00-1 (Histidine); 88899-55-2 (bafilomycin A1); 99896-85-2 (arginyl-glycyl-aspartic acid)

Enzyme No.: EC 1.13.12.- (Luciferase); EC 3.6.3.14 (Proton-Translocating ATPases)

26/8/7 (Item 2 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

08421136 93172398 PMID: 7867945

A fruiting body-specific cDNA, mfbAc, from the mushroom *Lentinus edodes* encodes a high-molecular-weight cell-adhesion protein containing an Arg-Gly-Asp motif.

Feb 17 1995

Tags: Support, Non-U.S. Gov't

Descriptors: Cell Adhesion Molecules--genetics--GE; *DNA, Complementary--genetics--GE; *DNA, Fungal--genetics--GE; *Genes, Structural, Fungal; *Oligopeptides; *Polyporaceae--genetics--GE; Amino Acid Sequence; Base Sequence; Binding, Competitive; Cell Adhesion; Cell Adhesion Molecules--chemistry--CH; Cell Adhesion Molecules--metabolism--ME; Cloning, Molecular; *Escherichia coli*; Molecular Sequence Data; RNA, Fungal--biosynthesis--BI; RNA, Messenger--biosynthesis--BI; Recombinant Fusion Proteins--biosynthesis--BI

Molecular Sequence Databank No.: GENBANK/S75925; GENBANK/S75926

CAS Registry No.: 0 (Cell Adhesion Molecules); 0 (DNA, Complementary); 0 (DNA, Fungal); 0 (MfbAC protein); 0 (Oligopeptides); 0 (RNA, Fungal); 0 (RNA, Messenger); 0 (Recombinant Fusion Proteins); 99896-85-2 (arginyl-glycyl-aspartic acid)

Gene Symbol: mfbAc
otype s26 full all

26/9/1 (Item 1 from file: 5)
NALOG(R)File 5:Biosis Previews(R)
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1332922 BIOSIS NO.: 20010536977

Potential tumor-targeting peptide vector of histidylated oligolysine conjugated to a tumor-homing RGD motif.

AUTHOR: Arai Y, Ito H, Hatake Shigetoshi, Kawa Shigeyuki, Kiyosawa Kuni
AUTHOR ADDRESS: (a)The Second Department of Internal Medicine, Shinshu University School of Medicine, 3-1-1 Asahi, Matsumoto, 390-8621; yara@shinshu.ac.jp**Japan
JOURNAL: Cancer Gene Therapy 10:161-167 October, 2003

MEDIUM: print

ISSN: 0920-1905

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

SUMMARY LANGUAGE: English

ABSTRACT: We have developed a potential tumor-targeting peptide **vector** (CRGD-hK) that is intended to be systemically and repeatedly administered to patients with advanced solid tumors. The peptide **vector** of 36 L-amino acid residues, CRGDHF(K-H)-(KKK)6, comprises a tumor-homing RGD motif, a DNA-binding oligolysine, and histidyl residues to facilitate the delivery into the cytosol. Using cytomegalovirus-driven luciferase-expression plasmids as a reporter, we tested the transfection efficiency of CRGD-hK in hepatoma and pancreatic cancer cell lines. Transfection with the CRGD-hK/plasmid complexes (molar ratio 4000:1) was inhibited by 10 mM bafilomycin A1, an inhibitor of the vacuolar ATPase endosomal proton pump, or 10 mM cycloR32TV, an integrin α 5 β 3 antagonist, indicating that the three elements of CRGD-hK could function as expected, at least in vitro. In nude mice bearing tumors created by subcutaneous inoculation, luciferase activity in the tumor **tissues** 48 hours after the injection of the CRGD-hK/plasmid complexes through the tail vein (1 ml/plasmid per mouse) was significantly higher than that in the lung, kidney, and spleen, but only slightly higher than that in the liver. Although the latter difference was small, we propose a potential nonviral gene therapy for advanced solid tumors through use of the tumor-targeting peptide **vector**.

REGISTRY NUMBERS: 9999-55-2: BAFILOMYCIN A-1; 9014-00-00: LUCIFERASE;
61669-41-80: LUCIFERASE; 61969-99-10: LUCIFERASE; 61970-00-10:
LUCIFERASE; 61213-54-10: LUCIFERASE; 76116-81-50: LUCIFERASE

DESCRIPTORS:

MAJOR CONCEPTS: Methods and Techniques; Molecular Genetics (Biochemistry and Molecular Biophysics); Tumor Biology

BIOSYSTEMATIC NAMES: Herpesviridae--Animal Viruses, Viruses,

Microorganisms; Hominidae--Primates, Mammalia, Vertebrata, Chordata, Animalia; Muridae--Rodentia, Mammalia, Vertebrata, Chordata, Animalia

ORGANISMS: Hep2 cell line (Hominidae)--human hepatoma cells; Hs700T cell line (Hominidae)--human pancreatic cancer cells; MIAPaCa-2 cell line (Hominidae)--human pancreatic cancer cells; PLC cell line (PRF cell line) (Hominidae)--human hepatoma cells; cytomegalovirus (Herpesviridae)--expression system; mouse (Muridae)--animal model, male, nude, strain-EALB/c

ORGANISM: PARTS ETC: cytosol

BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA): Animal Viruses; Animals; Chordates; Humans; Mammals; Microorganisms; Nonhuman Mammals; Nonhuman Vertebrates; Primates; Rodents; Vertebrates; Viruses

CHEMICALS & BIOCHEMICALS: DNA-binding oligolysine; RGD motif; bafilomycin A-1--vacuolar ATPase endosomal proton pump inhibitor; histidyl residues; luciferase--expression; luciferase expression plasmids--reporter; tumor-targeting peptide **vector**

METHODS & EQUIPMENT: nonviral gene therapy--genetic method, therapeutic method

MISCELLANEOUS TERMS: *transmembrane protein*
MESH CODES:

2504 Cytology and Cytochemistry-Animal
02-08 Cytology and Cytochemistry-Human
03-02 Genetics and Cytogenetics-General
03-06 Genetics and Cytogenetics-Animal
03-08 Genetics and Cytogenetics-Human
10-02 Enzymes-General and Comparative Studies; Nomenclature
24-04 Neoplasms and Neoplastic Agents-Pathology; Clinical Aspects;
Systemic Effects
31-00 Genetics of Bacteria and Viruses
33-06 Virology-Animal Host Viruses

BIOSYSTEMATIC CODES:

85-12 Herpesviridae (1993-
85-15 Herpesviridae
85-15 Herpesviridae

26/9/2 (Item 2 from file: 5)

DIALOG(R) File 1: Biosis Previews(R)
to 1003 BIOSIS Alerts. reserv.

1204-714 BIOSIS ID.: 200000003216

Structural characterization of mouse CD97 and study of its specific interaction with the murine decay-accelerating factor (DAF, CD55).

AUTH R: Qian Y-M; Haino M; Kelly K; Song W-C(a)

AUTH R ADDRESS: a Center for Experimental Therapeutics, University of Pennsylvania School of Medicine, 421 Curie Boulevard, 1351 BRBII/III, Philadelphia, PA, 19104-USA

JOURNAL: Immunology 96 2 :p303-311 Oct., 1999

ISSN: 0019-2805

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

SUMMARY LANGUAGE: English

ABSTRACT: CD97 is a newly identified, activation-associated human leucocyte antigen with seven putative transmembrane domains. It has an extended extracellular segment containing several adhesion molecule structure motifs, and has been shown to interact with the human complement regulator, decay-accelerating factor (DAF, CD55). To understand further the interaction between CD97 and DAF, as well as the structure and function of CD97 in general, we have cloned the mouse CD97 cDNA and studied the encoded protein for its membrane association property and ability to interact specifically with the murine decay-accelerating factor. The full-length mouse CD97 cDNA that we have cloned and characterized encodes a protein that is 60% identical to the three epidermal growth factor (EGF) domain-containing form of human CD97 but does not contain the Arg-Gly-Asp (RGD) motif which is present in human CD97. Two other alternatively spliced forms of mouse CD97 were also identified. These forms differ by the number of EGF-like sequence repeats present in the N-terminal region. Northern blot analysis revealed that CD97 is expressed widely in mouse **tissues** and in resting as well as activated cultured mouse splenocytes. Transient transfection of human embryonic kidney (HEK) 293 cells with the mouse CD97 cDNA in a green-fluorescence protein **vector** (pEGFP-N1) showed plasma membrane targeting of the expressed protein. Western blot analysis confirmed its membrane association and identified the existence of a processed N-terminal fragment, supporting the notion that CD97 on the cell membrane is composed of post-translationally generated subunits. Adhesion studies demonstrated that normal, but not DAF-enriched mouse erythrocytes and splenocytes adhered to mouse CD97-transfected HEK cells. The interaction of CD97 and DAF was found to be species-restrictive in that human erythrocytes were unable to bind to mouse CD97-transfected HEK cells. These results indicate that the general structure, membrane association property and DAF-binding ability of CD97 are conserved and that the adhesive interaction between CD97 and DAF is independent of the RGD motif. The finding that CD97 is distributed widely among various mouse

[illegible][illegible]

March 23rd

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Increased in vitro and in vivo gene transfer by adenovirus vectors containing chimeric fiber proteins.

DATE: Encl. 3

ABSTRACT: Alteration of the natural tropism of adenovirus (Ad) will permit gene transfer into specific cell types and thereby greatly broaden the scope of target diseases that can be treated by using Ad. We have constructed two Ad vectors which contain modifications to the Ad fiber coat protein that redirect virus binding to either alpha-v integrin (Ad3.F(RGD)) or heparan sulfate (AdZ.F(pK7)) cellular receptors. These vectors were constructed by a novel method involving E4 rescue of an E1-deficient Ad with a transfer **vector** containing both the E4 region and the modified fiber gene. Ad3.F(RGD) increased gene delivery to endothelial and smooth muscle cells expressing alpha-v integrins. Likewise, AdZ.F(pK7) increased transduction 5- to 500-fold in multiple cell types lacking high levels of Ad fiber receptor, including macrophage, endothelial, smooth muscle, fibroblast, and T cells. In addition, AdZ.F(pK7) significantly increased gene transfer in vivo to vascular smooth muscle cells of the porcine iliac artery following balloon angioplasty. These vectors may therefore be useful in gene therapy for vascular restenosis or for targeting endothelial cells in tumors. Although binding to the fiber receptor still occurs with these vectors, they demonstrate the feasibility of **tissue-specific targeting**.

targeting in cells which express low levels of Alpha-5 beta-1 receptor.

REGISTRY NUMBERS: 9050-30-0: HEPARAN SULFATE

DESCRIPTORS:

MAJOR CONCEPTS: Biochemistry and Molecular Biophysics; Blood and Lymphatics (Transport and Circulation); Cardil Vascular System (Transport and Circulation); Cell Biology; Genetics; Interact; Methods and Techniques; Microbiology; Muscular System (Movement and Support).

BIOSYSTEMATIC NAMES: Adenoviridae--Viruses; Suidae--Artiodactyla, Mammalia, Vertebrata, Chordata, Animalia

ORGANISMS: adenovirus (Adenoviridae); pig (Suidae)

BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA): animals; artiodactyls; chordates; mammals; microorganisms; nonhuman mammals; nonhuman vertebrates; viruses

CHEMICALS & BIOCHEMICALS: HEPARAN SULFATE

MECHANISMS/THEORY: Research Article; ALPHA-INTEGRIN; BALLOON ANGIOPLASTY; BLOOD AND LYMPHATICS; CHIMERIC FIBER PROTEINS; CIRCULATORY SYSTEM; DNA TRANSFER METHOD; ENDOTHELIAL CELL; FIBROBLAST; GENE THERAPY DEVELOPMENT; GENE VECTOR; GENETIC METHOD; HEPARAN SULFATE; ILIAC ARTERY; IMMUNE SYSTEM; MACROPHAGE; METHODOLOGY; MOLECULAR GENETICS; MUSCULAR SYSTEM; SKELETAL SYSTEM; SMOOTH MUSCLE; T CELL; TRANSFECTANT METHOD; TISSUE-SPECIFIC RECEPTOR TARGETING; VIRAL TRANSFECTION; VIRUS CELLULAR RECEPTOR

CONCEPT CODES:

0240 Cytology and Cytochemistry-Animal
03400 Genetics and Cytogenetics-Animal
10101 Biochemistry: Methods-Nucleic Acids, Purines and Pyrimidines
10104 Biochemistry: Studies-Proteins, Peptides and Amino Acids
10201 Biochemistry: Studies-Carbohydrates
14501 Cardiovascular System-General; Methods
15101 Blood, Blood-Forming Organs and Body Fluids-General; Methods
15104 Blood, Blood-Forming Organs and Body Fluids-Blood Cell Studies
15105 Blood, Blood-Forming Organs and Body Fluids-Lymphatic Tissue and Reticuloendothelial System
17101 Muscle-General; Methods
31100 Genetics of Bacteria and Viruses
33504 Virology-Animal Host Viruses
34101 Medical and Clinical Microbiology-Virology

BIOSYSTEMATIC TERMS:

02401 Adenoviridae (196--
03401 Suidae

26/9/4 (Item 4 from file: 5)

DIALOG File 5: Biosis Previews(F)

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09765144 BIOSIS NO.: 199595240712

A fruiting body-specific cDNA, mfbAc, from the mushroom *Lentinus edodes* encodes a high-molecular-weight cell-adhesion protein containing an Arg-Gly-Asp motif.

AUTHOR: Kondoh Osamu; Muto Akihiko; Kajiwara Susumu; Takagi Junichi; Saito Yoji; Shishido Kazuo(a)

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JOURNAL: Gene (Amsterdam) 194 (1):p31-37 1995

ISSN: 0378-1119

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: A cDNA clone (designated mfbAc, encoding 2157 amino acids) was isolated from a mature fruiting-body cDNA library of the edible mushroom *Lentinus edodes*. The mfbA transcript was abundant in mature fruiting bodies, detectable in immature fruiting bodies but absent in earlier developmental stages and in the vegetative mycelium. Although more abundant in the pileus than the stipe, only low levels were found in the gill tissue. The deduced MFB protein (234.8 kDa) contained a

Tags: Support, Non-... Gene

Descriptors: Cell Adhesion Molecules--genetics--GE; * DNA , Complementary
--genetics--GE; * DNA , Fungal--genetics--GE; * Genes, Structural, Fungal;
*Oligopeptides; *Polyporaceae--genetics--GE; Amino Acid Sequence; Base
Sequence; Binding, Competitive; Cell Adhesion; Cell Adhesion Molecules
--chemistry--CH; Cell Adhesion Molecules--metabolism--ME; Cloning,
Molecular; Escherichia coli; Molecular Sequence Data; RNA , Fungal
--biosynthesis--BI; RNA , Messenger--biosynthesis--BI; Recombinant Fusion
Proteins--biosynthesis--BI

Molecular Sequence Database No.: GENBANK/015611; GENBANK/015626

CAS Registry No.: 120111-120112-120113-120114-120115-120116-120117-120118-120119-120120-120121-120122-120123-120124-120125-120126-120127-120128-120129-120130-120131-120132-120133-120134-120135-120136-120137-120138-120139-120140-120141-120142-120143-120144-120145-120146-120147-120148-120149-120150-120151-120152-120153-120154-120155-120156-120157-120158-120159-120160-120161-120162-120163-120164-120165-120166-120167-120168-120169-120170-120171-120172-120173-120174-120175-120176-120177-120178-120179-120180-120181-120182-120183-120184-120185-120186-120187-120188-120189-120190-120191-120192-120193-120194-120195-120196-120197-120198-120199-120200-120201-120202-120203-120204-120205-120206-120207-120208-120209-120210-120211-120212-120213-120214-120215-120216-120217-120218-120219-120220-120221-120222-120223-120224-120225-120226-120227-120228-120229-120230-120231-120232-120233-120234-120235-120236-120237-120238-120239-120240-120241-120242-120243-120244-120245-120246-120247-120248-120249-120250-120251-120252-120253-120254-120255-120256-120257-120258-120259-120260-120261-120262-120263-120264-120265-120266-120267-120268-120269-120270-120271-120272-120273-120274-120275-120276-120277-120278-120279-120280-120281-120282-120283-120284-120285-120286-120287-120288-120289-120290-120291-120292-120293-120294-120295-120296-120297-120298-120299-120300-120301-120302-120303-120304-120305-120306-120307-120308-120309-120310-120311-120312-120313-120314-120315-120316-120317-120318-120319-120320-120321-120322-120323-120324-120325-120326-120327-120328-120329-120330-120331-120332-120333-120334-120335-120336-120337-120338-120339-120340-120341-120342-120343-120344-120345-120346-120347-120348-120349-120350-120351-120352-120353-120354-120355-120356-120357-120358-120359-120360-120361-120362-120363-120364-120365-120366-120367-120368-120369-120370-120371-120372-120373-120374-120375-120376-120377-120378-120379-120380-120381-120382-120383-120384-120385-120386-120387-120388-120389-120390-120391-120392-120393-120394-120395-120396-120397-120398-120399-120400-120401-120402-120403-120404-120405-120406-120407-120408-120409-120410-120411-120412-120413-120414-120415-120416-120417-120418-120419-120420-120421-120422-120423-120424-120425-120426-120427-120428-120429-120430-120431-120432-120433-120434-120435-120436-120437-120438-120439-120440-120441-120442-120443-120444-120445-120446-120447-120448-120449-120450-120451-120452-120453-120454-120455-120456-120457-120458-120459-120460-120461-120462-120463-120464-120465-120466-120467-120468-120469-120470-120471-120472-120473-120474-120475-120476-120477-120478-120479-120480-120481-120482-120483-120484-120485-120486-120487-120488-120489-120490-120491-120492-120493-120494-120495-120496-120497-120498-120499-120500-120501-120502-120503-120504-120505-120506-120507-120508-120509-120510-120511-120512-120513-120514-120515-120516-120517-120518-120519-120520-120521-120522-120523-120524-120525-120526-120527-120528-120529-120530-120531-120532-120533-120534-120535-120536-120537-120538-120539-120540-120541-120542-120543-120544-120545-120546-120547-120548-120549-120550-120551-120552-120553-120554-120555-120556-120557-120558-120559-120560-120561-120562-120563-120564-120565-120566-120567-120568-120569-120570-120571-120572-120573-120574-120575-120576-120577-120578-120579-120580-120581-120582-120583-120584-120585-120586-120587-120588-120589-120590-120591-120592-120593-120594-120595-120596-120597-120598-120599-120600-120601-120602-120603-120604-120605-120606-120607-120608-120609-120610-120611-120612-120613-120614-120615-120616-120617-120618-120619-120620-120621-120622-120623-120624-120625-120626-120627-120628-120629-120630-120631-120632-120633-120634-120635-120636-120637-120638-120639-120640-120641-120642-120643-120644-120645-120646-120647-120648-120649-120650-120651-120652-120653-120654-120655-120656-120657-120658-120659-120660-120661-120662-120663-120664-120665-120666-120667-120668-120669-120670-120671-120672-120673-120674-120675-120676-120677-120678-120679-120680-120681-120682-120683-120684-120685-120686-120687-120688-120689-120690-120691-120692-120693-120694-120695-120696-120697-120698-120699-120700-120701-120702-120703-120704-120705-120706-120707-120708-120709-120710-120711-120712-120713-120714-120715-120716-120717-120718-120719-120720-120721-120722-120723-120724-120725-120726-120727-120728-120729-120730-120731-120732-120733-120734-120735-120736-120737-120738-120739-120740-120741-120742-120743-120744-120745-120746-120747-120748-120749-120750-120751-120752-120753-120754-120755-120756-120757-120758-120759-120760-120761-120762-120763-120764-120765-120766-120767-120768-120769-120770-120771-120772-120773-120774-120775-120776-120777-120778-120779-120780-120781-120782-120783-120784-120785-120786-120787-120788-120789-120790-120791-120792-120793-120794-120795-120796-120797-120798-120799-120800-120801-120802-120803-120804-120805-120806-120807-120808-120809-120810-120811-120812-120813-120814-120815-120816-120817-120818-120819-120820-120821-120822-120823-120824-12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*** Status: Path 1 of Dialog Information Services via Modem.

*** Status: Initializing TCP/IP using (UseTelnetProto 1 ServiceID proto-dialog).
Trying 31260010003999...Open.

DIALOG INFORMATION SERVICES

PLEASE LOGON:

***** HHHHHHHH SSSSSSSS?

Status: Signing onto Dialog

ENTER PASSWORD:

***** HHHHHHHH SSSSSSSS? *****

Welcome to DIALOG

Status: Connected

Dialog level 02.09.15D

Last logoff: 09oct12 12:45:57

Login file433 11oct12 11:24:06

*** ANNOUNCEMENT ***

--The following files from Cambridge Scientific Abstracts (CSA)
are no longer available: 14, 28, 32, 33, 36, 37, 41, 44, 56, 61,
76, 77, 108, 117, 232, 238, 269, 293, 335. Please enter HELP CSA
plus the file number to identify alternative sources of information.
Example: HELP CSA14.

--File 616 D&B Dun's Electronic Business Directory is now online
completely updated and redesigned. For details, see HELP NEWS 616.

--File 991 - NewsRoom now contains May 2002 to present records.
File 993 - NewsRoom archive contains 2002 records from January 2002-
April 2002. To search all 2002 records, BEGIN 990,993 or B NEWS2002.

--Alerts have been enhanced to allow a single Alert profile to be
stored and run against multiple files. Duplicate removal is available
across files and for up to 12 months. The Alert may be run according
to the file's update frequency or according to a custom
calendar-based schedule. There are no additional prices for these
enhanced features. See HELP ALERT for more information.

--U.S. Patents Fulltext (File 654) has been redesigned with
new search and display features. See HELP NEWS 654 for
information.

--Connect Time joins DialUnits as pricing options on Dialog.
See HELP CONNECT for information.

--CLAIMS/US Patents (Files 940, 941, 942) have been enhanced
with both application and grant publication level in a
single record. See HELP NEWS 940 for information.

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For information about the access to file 4b please see Help News43.

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 ***Dialog NewsRoom - 2001 Archive (File 994)
 ***Dialog NewsRoom - 2000 Archive (File 995)
 ***TRADEMARKSCAN-Finland (File 579)
 ***TRADEMARKSCAN-Norway (File 578)
 ***TRADEMARKSCAN-Sweden (File 575)

*** UPDATING RESUMED

***Belgian European Business (File 481,

RELOADS:

***D&P Van's Electronic Business Directory (File 515,
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 ***Population Demographics (File 581)
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 ***Newport News Daily Press (File 747)
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 ***Tax Notes Today (File 790)
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 ?h 5, 155, 172

10Oct02 11:26:44 User263147 Session D15.1
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 \$0.00 Estimated cost FileHomeBase
 \$0.00 TELNET
 \$0.00 Estimated cost this search
 \$0.00 Estimated total session cost 0.183 DialUnits

SYSTEM:OS - DIALOG OneSearch

File 5:BIOSIS Previews(R) 1969-2002/Oct W1
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File 155:MEDLINE(R) 1966-2002/Sep W5

***File 155: Alert feature enhanced for multiple files, duplicates removal, customized scheduling. See HELP ALERT.**

File 172:EMBASE Alert 2002/Oct W1

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Set Items Description

?e au=shuey s

Ref	Items	Index-term
E1	12	*AU=SHUEY S
E2	6	AU=SHUEY S A
E3	1	AU=SHUEY S R
E4	1	AU=SHUEY STEVE
E5	8	AU=SHUEY STEVEN W
E6	1	AU=SHUEY T F
E7	3	AU=SHUEY W
E8	38	AU=SHUEY W C
E9	1	AU=SHUFAN CH
E10	2	AU=SHUFANG L
E11	1	AU=SHUFANG Y
E12	1	AU=SHUFANG Y.

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	8	AU=SHUEY STEVEN W
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Ref	Items	Index-term
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E3	15	*AU=MOUSA SHAKER

E4 174 AU=MOUSA SHAKER A
 E5 3 AU=MOUSA SHAKER AHMED
 E6 2 AU=MOUSA SHAFIR
 E7 1 AU=MOUSA SHAYMAA S
 E8 10 AU=MOUSA W
 E9 3 AU=MOUSA W A
 E10 8 AU=MOUSA W F
 E11 3 AU=MOUSA W M
 E12 3 AU=MOUSA WEAM F

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15 AU=MOUSA SHAKER
 178 AU=MOUSA SHAKER A
 3 AU=MOUSA SHAKER AHMED
 S2 196 AU='MOUSA SHAKER' OR AU='MOUSA SHAKER A' OR AU='MOUSA SHAKER AHMED'

?s1 or s2

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196 S2

S3 56393-1 1 OR S2

?s s1 or s2

19 S1

196 S2

S4 215 S1 OR S2

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215 S4

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S5 0 S4 AND ANGIOGENS

?s s4 and angiogen?

215 S4

36-17 ANGIOGEN?

S6 30 S4 AND ANGIOGEN?

?type s6 free all

6/8/1 (Item 1 from file: 5)

13841333 BIOSIS NO.: 100200500154

Anti-integrin as novel drug-discovery targets: Potential therapeutic and diagnostic implications.

2001

6/8/2 (Item 2 from file: 5)

13643981 BIOSIS NO.: 200200272803

Antiangiogenic and antimetastatic properties of Neovastat (AE-941), an orally active extract derived from cartilage tissue.

2000

6/8/3 (Item 3 from file: 5)

13549328 BIOSIS NO.: 01200178149

Junctional adhesion molecule 1, JAM-1, regulates bFGF-induced angiogenesis

2001

6/8/4 (Item 4 from file: 5)

13536511 BIOSIS NO.: 200200165402

Obtustatin, potent inhibitor of angiogenesis by interaction with alphabeta1 integrin.

2001

6/8/5 (Item 5 from file: 5)

13513306 BIOSIS NO.: 200200152127

Anti- angiogenesis mechanisms and efficacy of the low molecular weight heparin, tinzaparin: Anti-cancer efficacy beyond its anticoagulants

effects.

2001

6/8/6 (Item 6 from file: 5)
13522727 BIOSIS NO.: 200200151348

Efficacy of heparin molecular weight fractions and low molecular weight
heparins on the release of Tissue Factor Pathway Inhibitor from human
endothelial cells: Structure-function relationship.

2001

6/8/7 (Item 7 from file: 5)
13503579 BIOSIS NO.: 200100510728

Inhibition of angiogenesis by peptide analogs of high molecular weight
kininogen domain 5.

2001

6/8/8 (Item 8 from file: 5)
13502835 BIOSIS NO.: 200100299982

Anti-angiogenic efficacy & mechanism of the low molecular weight heparin
(LMWH), Tinzaparin and tissue factor pathway inhibitor (TFPI): Potential
anti-cancer link and benefits.

2000

6/8/9 (Item 9 from file: 5)
13589656 BIOSIS NO.: 200100296805

Anti-angiogenesis and anti-tumor efficacy of warfarin in the chick
chorioallantoic membrane (CAM) model.

2000

6/8/10 (Item 10 from file: 5)
13546588 BIOSIS NO.: 200100253737

Anti-angiogenesis and anti-tumor efficacy of warfarin.

2001

6/8/11 (Item 11 from file: 5)
13537206 BIOSIS NO.: 200100244355

In vitro angiogenic activity of endothelial cells induced by neutrophils.

2001

6/8/12 (Item 12 from file: 5)
13537206 BIOSIS NO.: 200100244349

Common pathways involved in alpha-chemokine and cytokine mediated
angiogenesis.

2001

6/8/13 (Item 13 from file: 5)
12362075 BIOSIS NO.: 200100069224

Estrogen receptor-alpha in the inhibition of cancer growth and
angiogenesis.

2000

6/8/14 (Item 14 from file: 5)
13519456 BIOSIS NO.: 2001003036607

Antiangiogenesis efficacy of nitric oxide donors.

2000

6/8/15 (Item 15 from file: 5)
12694146 BIOSIS NO.: 200000447648

Anti- angiogenic efficacy of the low molecular weight heparin (LMWH) ,
Tinzaparin and tissue factor pathway inhibitor (TFPI).
2000

6/8/16 (Item 16 from file: 5)
12687096 BIOSIS NO.: 2000000440598
Angiogenic activity of a platelet specific C-X-C chemokine, neutrophil
activating protein-2.
2000

6/8/17 (Item 17 from file: 5)
12685304 BIOSIS NO.: 2000000438606
SM256, a novel non-peptide and potent integrin antagonist for vascular cell
integrin alphavbeta3 potently inhibit angiogenesis -mediated disorders.
2000

6/8/18 (Item 18 from file: 5)
12616539 BIOSIS NO.: 2000000370041
Hypoxia induces differential expression of the integrin receptors
alphavbeta3 and alphavbeta5 in cultured human endothelial cells.
2000

6/8/19 (Item 19 from file: 5)
12690374 BIOSIS NO.: 2000000343876
Regulation of angiogenesis in vivo by ligation of integrin alpha5beta1
with the central cell-binding domain of fibronectin.
2000

6/8/20 (Item 20 from file: 5)
12413114 BIOSIS NO.: 2000000176616
SQ885, a novel non-peptide integrin antagonist for vascular cell integrins
alphavbeta3, alphavbeta5, and alpha5beta1 potently inhibit angiogenesis
-mediated disorders.
2000

6/8/21 (Item 21 from file: 5)
12413102 BIOSIS NO.: 2000000176604
Inhibition of angiogenesis by peptides derived from kininogen domain 5 &
by a monoclonal antibody to kininogen domain 5.
2000

6/8/22 (Item 22 from file: 5)
12350832 BIOSIS NO.: 2000000104334
Domain 5 of high molecular weight kininogen (kininostatin) down-regulates
endothelial cell proliferation and migration and inhibits angiogenesis .
2000

6/8/23 (Item 23 from file: 5)
12388862 BIOSIS NO.: 200000046729
Inhibition of tumor angiogenesis by a monoclonal antibody to kininogen
domain 5.
1999

6/8/24 (Item 24 from file: 5)
12397408 BIOSIS NO.: 200000045275
Anti- angiogenesis efficacy of small molecule alpha5beta1 integrin
antagonist, SJ749.
1999

6/8/25 (Item 25 from file: 5)
12287135 BIOSIS NO.: 200000045052
Anti- angiogenic efficacy of the low molecular weight heparin (LMWH),
Tinzaparin and tissue factor pathway inhibitor (TFPI).
1999

6/8/26 (Item 26 from file: 5)
12284682 BIOSIS NO.: 200000042549
Key role of alphaVbeta3 integrin in hypoxia and cytokine-induced
upregulation of vascular endothelial growth factor (VEGF) and other
angiogenesis processes: Implications in angiogenesis -mediated
disorders.
1999

6/8/27 (Item 27 from file: 5)
12129915 BIOSIS NO.: 199900124762
Antagonists of vascular cell integrin alpha 5beta 1 inhibit angiogenesis .
1998

6/8/28 (Item 28 from file: 5)
12038394 BIOSIS NO.: 199900218913
Novel small molecule alphav integrin antagonists: Comparative anti-cancer
efficacy with known angiogenesis inhibitors.
1999

6/8/29 (Item 29 from file: 5)
1207469 BIOSIS NO.: 199900307988
Role of hypoxia and extracellular matrix-integrin binding in the modulation
of angiogenic growth factors secretion by retinal pigmented epithelial
cells.
1999

6/8/30 (Item 30 from file: 5)
12072483 BIOSIS NO.: 199900783002
Anti- angiogenesis efficacy of high affinity receptor subtype specific
somatostatin analogues.
1999

6/8/31 (Item 31 from file: 5)
12072482 BIOSIS NO.: 199900783001
Anti- angiogenesis efficacy of nitric oxide donor.
1999

6/8/32 (Item 32 from file: 5)
12002481 BIOSIS NO.: 199900283000
Anti- angiogenesis efficacy of cyclooxygenase inhibitors.
1999

6/8/33 (Item 33 from file: 5)
11924486 BIOSIS NO.: 199900179595
Antagonist of vascular cell integrin avb3 and avb5 inhibit angiogenesis .
1999

6/8/34 (Item 34 from file: 5)
11425659 BIOSIS NO.: 199800206991
Mechanisms of angiogenesis in vascular disorders: Potential therapeutic

targets.
1996

6/8/35 (Item 35 from file: 5)
10635489 BIOSIS NO.: 199693256534
Antagonists of integrin alpha-V-BETA-3 inhibit retinal neovascularization
in a murine model.
1996

6/8/36 (Item 1 from file: 155)
DIALOG(R) File 155:MEDLINE(R)

13161746 21882384 PMID: 11885025
Anticoagulants in thrombosis and cancer: the missing link.
Feb 1991

Tags: Animal; Human
Descriptors: *Anticoagulants--therapeutic use--TU; *Neoplasms --drug
therapy--DT; *Thrombosis--drug therapy--DT; Neoplasm Metastasis --drug
therapy--DT; Neoplasm Metastasis--prevention and control--PC; Neoplasms
--blood--BL; Neoplasms--complications--CO; Neovascularization, Pathologic
--drug therapy--DT; Neovascularization, Pathologic--prevention and control
--PC; Thrombosis--etiology--ET
CAS Registry No.: C (Anticoagulants)

6/8/37 (Item 2 from file: 155)
DIALOG(R) File 155:MEDLINE(R)

1313896 21196104 PMID: 12311413
Vitronectin receptors in vascular disorders.
Aug 1991

6/8/38 (Item 3 from file: 155)
DIALOG(R) File 155:MEDLINE(R)

13431791 21108646 PMID: 11113244
Anticoagulants in thrombosis and cancer: the missing link.
Apr 1991

Tags: Animal; Human
Descriptors: *Anticoagulants--therapeutic use--TU; *Neoplasms --drug
therapy--DT; *Thrombosis--drug therapy--DT; Neoplasms--complications--CO;
Neovascularization, Pathologic--drug therapy--DT; Neovascularization,
Pathologic--etiology--ET; Recurrence; Thrombosis--etiology--ET
CAS Registry No.: C (Anticoagulants)

6/8/39 (Item 4 from file: 155)
DIALOG(R) File 155:MEDLINE(R)

1318934 22124642 PMID: 12133730
Anti-integrin as novel drug-discovery targets: potential therapeutic and
diagnostic implications.
Aug 1991

6/8/40 (Item 5 from file: 155)
DIALOG(R) File 155:MEDLINE(R)

1316293 21963023 PMID: 11964978
Antiangiogenic and antimetastatic properties of Neovastat (AE-941), an
orally active extract derived from cartilage tissue.
2002

Tags: Animal; Female; Human
Descriptors: Angiogenesis Inhibitors--pharmacology--PD; Antineoplastic
Agents--pharmacology--PD; *Blood Vessels--drug effects--DE; *Neovasculariza

--pharmacology--PD; Administration, drug; **Angiogenesis** Inhibitors;
 --isolation and purification--IP; Antineoplastic Agents --isolation and
 purification--II; Antineoplastic Combined Chemotherapy Protocols
 --therapeutic use--TU; Body Weight--irw; Effects--lk; Carcinoma, Lewis Lung;
 --blood supply--BS; Carcinoma, Lewis Lung--drug therapy--DT; Carcinoma,
 Lewis Lung--pathology--PA; Cartilage--chemistry--CH; Chick Embryo;
 Cisplatin--administration and dosage--AD; Collagen; Dose-Response
 Relationship, Drug; Drug Combinations; Fibroblast Growth Factor 2--toxicity
 --TO; Laminin; Mice; Mice, Inbred BALB C; Proteoglycans; Tissue Extracts
 --isolation and purification--IP

CAS Registry No.: 0 (Angiogenesis Inhibitors); 0 (Antineoplastic
 Agents); 0 (Antineoplastic Combined Chemotherapy Protocols); 0 (Drug
 Combinations); 0 (Laminin); 0 (Proteoglycans); 0 (Tissue Extracts); 0
 (shark cartilage extract AE 941); 103107-01-3 (Fibroblast Growth Factor
 2); 119973-11-6 (matrigel); 15663-27-1 (Cisplatin); 9007-34-5
 (Collagen)

Is osler and webber and rendu

1909 OSLER

141 WEBBER

1217 RENDU

0 OSLER AND WEBBER AND RENDU

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0 "OSLER-WEBBER-RENDU"

Is bartonellosis

0 166 BARTONELLOSIS

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Set Items Description

S1 29 AU='SHUEY S' OR AU='SHUEY S A' OR AU='SHUEY S R' OR AU='SH-
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S2 196 AU='MOUSA SHAFER' OR AU='MOUSA SHAFER A' OR AU='MOUSA SHAF-
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S4 235 31 OR S2

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S8 0 "OSLER-WEBBER-RENDU"

S9 166 BARTONELLOSIS

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166 S9

56817 ANGIOGEN?

S11 0 S9 AND ANGIOGEN?

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10/9/1 (Item 1 from file: 5)

DIALOG(R)File 1:Picosis Previews(R)

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11294560 BIOSIS NO.: 110090076447

BARTONELLA-BACILLIFORMIS STIMULATES ENDOTHELIAL CELLS IN-VITRO AND IS

ANGIOGENIC IN-VIVO

AUTHOR: GARCIA F J; WOUTA J; BROADLEY K N; DAVIDSON J M; HOOVER R L

AUTHOR ADDRESS: DEP. OF PATHOL., VANDERBILT UNIV., NASHVILLE, TENN. 37232.

JOURNAL: AM J PATHOL 136 (5). 1990. 1125-1136. 1990

FULL JOURNAL NAME: American Journal of Pathology

CODEN: AJPAAP

RECORD TYPE: Abstract

LANGUAGE: ENGLISH

ABSTRACT: Bartonellosis, a biphasic disease caused by motile
 intracellular bacteria, produces in its tissue phase a characteristic
 dermal eruption "Verruga peruana" resulting from a pronounced endothelial
 cell proliferation. Bacteria are found in the interstitium and within the
 cytoplasm of endothelial cells (Pocha-Lima inclusion). The aim of this
 study was to determine if *Bartonella bacilliformis* produce a substance(s)
 that might be responsible for the vascular proliferation seen in the

Verruga. This was assessed in an *in vitro* system using human endothelial cells and measuring proliferation as well as production of tissue type plasminogen activator after exposure of the endothelial cultures to *B. bacilliformis* extracts. Our results indicate that *B. bacilliformis* possess an activity that stimulates endothelial cell proliferation up to three times that of control. The factor(s) is specific for endothelial cells, heat sensitive, larger than 12 to 14 kd, not enhanced by heparin, has no affinity for heparin, and is precipitated by 4% ammonium sulfate. In addition, the *B. bacilliformis* extracts stimulate production of t-PA antigen in a concentration-dependent fashion. This activity is also heat sensitive and not lost after dialysis. 12 to 14 kd. *B. bacilliformis* extracts, however, do not increase the production of plasminogen activator inhibitor. It was also determined that *B. bacilliformis* extracts stimulate the formation of new blood vessels in an *in vivo* model for **angiogenesis**. These results describe a bacterial factor(s) that stimulates two important steps in the development of new blood vessels *in vitro*, as well as the formation of new blood vessels *in vivo*. Determining the mechanism of action, combined with complete characterization of this factor(s), may help in understanding the pathogenesis not only of the Verruga and **angiogenesis** in general but also the recently described Cat-Scratch-associated epithelioid hemangiomas in patients with AIDS and Kaposi sarcoma.

DESCRIPTORS: HUMAN INTRACELLULAR BACTERIA VERRUGA PERUANA DERMAL ERUPTION
BLOOD VESSEL FORMATION HEAT SENSITIVITY CELL-SIZE FACTOR CAT-SCRATCH
HEMANGIOMA KAPOSI SARCOMA

CONCEPT CODES:

- 1111 Cytology and Cytochemistry-Human
- 1111 Pathology, General and Miscellaneous-Inflammation and Inflammatory Disease
- 1411 Cardiovascular System-Physiology and Biochemistry
- 1411 Cardiovascular System-Blood Vessel Pathology
- 1411 Integumentary System-Anatomy
- 1411 Integumentary System-Pathology
- 1511 Developmental Biology-Embryology-Morphogenesis, General
- 1611 Medical and Clinical Microbiology-Bacteriology
- 1611 Biochemical Studies-Proteins, Peptides and Amino Acids
- 1611 External Effects-Temperature as a Primary Variable-Hot (1971-)
- 1611 Temperature: Its Measurement, Effects and Regulation-General Measurement and Methods
- 1611 In Vitro Studies, Cellular and Subcellular

BIOSYSTEMATIC CODES:

- 11111 Bartonellaceae (1979-)
- 11111 Hominidae

BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA):

- Microorganisms
- Bacteria
- Animals
- Chordates
- Vertebrates
- Mammals
- Primates
- Humans

10/9/2 (Item 1 from file: 155)

DIALOG R; File 155: MEDLINE(R)

(6) 11133 90274044 PMID: 1693472

Bartonella bacilliformis stimulates endothelial cells in vitro and is angiogenic in vivo.

Garcia F U; Wojcik J; Broadley K N; Davidson J M; Hoover F L
Department of Pathology, Vanderbilt University, Nashville, Tennessee
37232.

American journal of pathology (UNITED STATES); May 1990; 136 (5):
p1325-35; ISSN 0002-9440 Journal Code: C370502

Contract/Grant No.: AG06528; AG; NIA; HL36526; HL; NHLBI
Document type: Journal Article

Language: ENGLISH
 Main Title: Verruga
 Record type: Completed
 Subtitle: AIM; INDEX MEDICUS

Bartonellosis, a biphasic disease caused by motile intracellular bacteria, produces in its tissue phase a characteristic dermal eruption (Verruga peruana) resulting from a pronounced endothelial cell proliferation. Bacteria are found in the interstitium and within the cytoplasm of endothelial cells (Kochi-Lima inclusion). The aim of this study was to determine if *Bartonella bacilliformis* produce a substance(s) that might be responsible for the vascular proliferation seen in the Verruga. This was assessed in an in vitro system using human endothelial cells and measuring proliferation as well as production of tissue type plasminogen activator after exposure to the endothelial cultures to *B. bacilliformis* extracts. Our results indicate that *B. bacilliformis* possess an activity that stimulates endothelial cell proliferation up to three times that of control. The factor(s) is specific for endothelial cells, heat sensitive, larger than 11 to 14 kd, not enhanced by heparin, has no affinity for heparin, and is precipitated by 45% ammonium sulfate. In addition, the *B. bacilliformis* extracts stimulate production of t-PA antigen in a concentration-dependent fashion. This activity is also heat sensitive and not lost after dialysis (12 to 14 kd). *B. bacilliformis* extracts, however, do not increase the production of plasminogen activator inhibitor. It was also determined that *B. bacilliformis* extracts stimulate the formation of new blood vessels in an in vivo model for **angiogenesis**. These results describe a bacterial factor(s) that stimulates two important steps in the development of new blood vessels in vitro, as well as the formation of new blood vessels in vivo. Determining the mechanism of action, combined with a complete characterization of this factor(s), may help in understanding the pathogenesis not only of the Verruga and **angiogenesis** in general but also the recently described Cat-Scratch-associated epithelioid hemangiomas in patients with AIDS and Kaposi sarcoma.

Tags: Animal; Human; Support, U.S. Gov't, Non-P.H.S.; Support, U.S. Gov't, P.H.S.

Descriptors: *Bartonella--physiology--PH; *Endothelium, Vascular--cytology--CY; *Neovascularization, Pathologic--physiopathology--PP; Antigens--analysis--AN; Cell Adhesion; Cell Division; Cells, Cultured; Endothelium, Vascular--immunology--IM; Endothelium, Vascular--physiology--PH; Mice, Smooth--cytology--CY; Neutrophils--physiology--PH; Rats; Rats, Inbred Strains; Tissue Plasminogen Activator--immunology--IM; Wound Healing

CAS Registry No.: (Antigen*)

Enzyme No.: EC 3.4.21.63 (Tissue Plasminogen Activator)

Record Date Created: 19911719

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S1	136	AU='MOUSA SHAKER' OR AU='MOUSA SHAKER A' OR AU='MOUSA SHAKER AHMED'
S3	5639501	1 OR S2
S4	235	S1 OR S2
S	0	S4 AND ANGIOGENS
S6	40	S4 AND ANGIOGEN?
S	0	OSLER AND WEBBER AND PENNY
S	1	"OSLER-WEBBER-PENNY"
S9	166	BARTONELLOSIS
S10	1	S3 AND ANGIOGEN?
S11	57239	OSMOTIC
Is s4 and s11	225	S4

12229 S11
S12 1 S4 AND S11
type s12/full/all

12/9/1 (Item 1 from file: 5)
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12357430 BIOSIS NO.: 103000310522

Effects of the novel alphav integrin antagonist SM256 and cis-platinum on growth of murine squamous cell carcinoma PAM LY8.

AUTHOR: van Waas Carter; Enamorado-Ayala Ilean; Hecht David; Salica Lucien; Chen Zheng; Barr Douglas G; **Mousa Shaker**

AUTHOR ADDRESS: a,Tumor Biology Section, Head and Neck Surgery Branch, National Institute of Health and Other Communication Disorders, National Institutes of Health, Bldg. 10, Rm. 5B55, Bethesda, MD, 20895-1119**USA

JOURNAL: International Journal of Oncology 16 (6):p1189-1195 June, 2000

MEDIUM: print

ISSN: 1014-6419

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

SUMMARY LANGUAGE: English

ABSTRACT: Increased density of proliferating and migrating tumor cells and neovascular endothelial cells has been associated with tumor progression and poor prognosis in patients with squamous cell carcinoma (SCC). Tumor and neovascular endothelial cells in squamous cell carcinoma have been reported to express integrin heterodimers containing the α_v subunit, which binds to vitronectin and other extra-cellular matrix proteins that contain the amino acid recognition sequence Arg-Gly-Asp (RGD). In the present study, we examined the effect of the novel non-peptide α_v integrin antagonist SM256 on growth of SCC line PAM LY8 in BALB/c SCID mice, and determined whether SM256 has direct inhibitory effects on growth of murine endothelial and PAM LY8 SCC cells in vitro. SM256 inhibit cell adhesion of murine cells expressing $\alpha_v\beta_3$ and $\alpha_v\beta_5$ integrins in vitro with an IC₅₀ of 35 nM and 10 nM, respectively. Growth of PAM LY8 tumors in vivo was inhibited with 14-day continuous administration of SM256 by subcutaneous osmotic diffusion pump, during which a mean serum concentration of 56 nM was detected. While both murine aortic endothelial cells and PAM LY8 were found to express α_v integrins by fluorescence cytofluorometry, SM256 at 30 nM in MTT assay completely inhibited growth of endothelial cells, but had no significant direct effect on growth of PAM LY8 cells. We compared the effect on growth of PAM LY8 of SM256 infusion versus single agent or combination chemotherapy with a maximally tolerated dose of cis-platinum, which is used as a standard chemotherapy for SCC. When treatment was initiated at either 7 or 11 days following establishment of tumor, 14-day infusion of SM256 had an inhibitory effect on growth that was similar to that obtained with single dose cis-platinum, but no additive effect of concurrent therapy with SM256 and cis-platinum was observed. These results demonstrate the activity and feasibility of use of α_v antagonists such as SM256 for therapy of SCC.

KEYWORD NUMBERS: 11663- 1-1: CIS-PLATINUM

DESCRIPTION:

MAJOR CONCEPTS: Pharmacology; Tumor Biology

BIOSYSTEMATIC NAMES: Muridae--Rodentia, Mammalia, Vertebrata, Chordata, Animalia

PRENOMENS: PAM LY8 cell line (Muridae)--squamous cell carcinoma cell

PRENOMENS: PARTS ETC: aortic endothelial cell--circulatory system;

neovascular endothelial cell--circulatory system

BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA): Animals; Chordates; Mammals;

Nonhuman Mammals; Nonhuman Vertebrates; Rodents; Vertebrates

DISEASES: squamous cell carcinoma--neoplastic disease

CHEMICALS & BIOCHEMICALS: SM256--alpha-V integrin antagonist;
cis-platinum

ALTERNATE INDEXING: Car llama, Squamous Cell Carcin

CONCEPT CODES:

20002 Pharmacology-General
02006 Cytology and Cytochemistry-General
24002 Cytoplasm and Cell Particles: Apoptosis
14001 Cardiovascular System-General; Methods

HICSYSTEMATIC CODES:

80375 Muridae
?s 12 and angiogen?
1247771 12
36-27 ANGIOGEN?
S12 2116 12 AND ANGIOGEN?
?s s12 and angiogen?
1 S12
36-27 ANGIOGEN?
S14 5 S14 AND ANGIOGEN?
?s rgd
S15 5195 RGD
?s s15 and angiogen?
5195 S15
36-27 ANGIOGEN?
S16 140 S16 AND ANGIOGEN?
?s s16 and py-2000
140 S16
180345 PY-2000
S17 63 S16 AND PY-2000
?type s17/fre/all

17/8/1 (Item 1 from file: 5)

13894565 BIOSIS NO.: 200200523386

Peptido-mimetic compounds containing RGD sequence useful as integrin inhibitors.

2002

17/8/2 (Item 2 from file: 5)

13727942 BIOSIS NO.: 200200356763

In vitro and in vivo evaluation of a technetium-99m-labeled cyclic RGD peptide as a specific marker of alphavbeta3 integrin for tumor imaging.

2002

17/8/3 (Item 3 from file: 5)

13709104 BIOSIS NO.: 200200317925

Dell mediates VSMC adhesion, migration, and proliferation through interaction with integrin alphavbeta3.

2002

17/8/4 (Item 4 from file: 5)

13674697 BIOSIS NO.: 200200313516

Osteopontin deficiency protects joints against destruction in anti-type II collagen antibody-induced arthritis in mice.

2002

17/8/5 (Item 5 from file: 5)

13652749 BIOSIS NO.: 200200281570

Inhibition of the alpha-v integrins with a cyclic RGD peptide impairs angiogenesis, growth and metastasis of solid tumours in vivo.

2002

17/8/6 (Item 6 from file: 5)

13651989 BIOSIS NO.: 200200290810

Kinetics of integrin expression in the mouse model of proliferative retinopathy and success of secondary intervention with cyclic RGD peptides.

2002

17/8/7 (Item 7 from file: 5)
13610026 BIOSIS NO.: 200200238847
alphav-integrin antagonist EMD 121974 induces apoptosis in brain tumor
cells growing on vitronectin and tenascin.
2002

17/8/8 (Item 8 from file: 5)
13582758 BIOSIS NO.: 200200211579
A novel RGD peptide inhibited tumor growth in vivo via anti- angiogenic
mechanism.
2001

17/8/9 (Item 9 from file: 5)
13570046 BIOSIS NO.: 200200193867
Characterisation of the thiol isomerase activity of alphavbeta3.
2001

17/8/10 (Item 10 from file: 5)
13561644 BIOSIS NO.: 200200190465
Preparation and functional evaluation of RGD -modified proteins as
alphavbeta3 integrin directed therapeutics.
2002

17/8/11 (Item 11 from file: 5)
13519998 BIOSIS NO.: 200200143819
Shear stress-induced endothelial cell migration involves integrin signaling
via the fibronectin receptor subunits alpha5 and beta1.
2002

17/8/12 (Item 12 from file: 5)
13439633 BIOSIS NO.: 200200063454
Domain IVa of laminin alpha5 chain is cell-adhesive and binds beta1 and
alphaVbeta3 integrins through Arg-Gly-Asp.
2001

17/8/13 (Item 13 from file: 5)
13409503 BIOSIS NO.: 200200033324
Targeted delivery of IL-12 to alphavbeta3 integrin inhibits angiogenesis .
2001

17/8/14 (Item 14 from file: 5)
13409501 BIOSIS NO.: 200200033322
Additive effect of fenretinide and the RGD -blocking peptide RGDFV on
endothelial cell ceramide.
2001

17/8/15 (Item 15 from file: 5)
13409500 BIOSIS NO.: 200200033321
Synthesis and biological evaluation of novel RGD -containing cyclic
pseudopeptides.
2001

17/8/16 (Item 16 from file: 5)
13358139 BIOSIS NO.: 200100565288
Tumor targeting with radiolabeled integrin alphavbeta3 binding RGD

peptides in a nude mouse tumor model.
2001

17/8/17 (Item 17 from file: 5)
13348048 BIOSIS NO.: 200100555794
Inhibition of hepatic metastasis in mice treated with cell-binding domain
of human fibronectin and angiogenesis inhibitor TNP-470.
2001

17/8/18 (Item 18 from file: 5)
13348645 BIOSIS NO.: 200100555794
A novel synthetic Arg-Gly-Asp-containing peptide cyclo(-RGDfdbdV-) is the
potent inhibitor of angiogenesis.
2001

17/8/19 (Item 19 from file: 5)
13348697 BIOSIS NO.: 200100555246
In vitro evaluation of a 99mTc labeled RGD peptide as an antagonist of
avb3 integrins in tumor.
2001

17/8/20 (Item 20 from file: 5)
13348642 BIOSIS NO.: 200100555791
Glycosylated RGD -containing peptides: Tracer for tumor targeting and
angiogenesis imaging with improved biokinetics.
2001

17/8/21 (Item 21 from file: 5)
13326977 BIOSIS NO.: 200100554126
Peptido-mimetic compounds containing RGD sequence useful as integrin
inhibitors.
2001

17/8/22 (Item 22 from file: 5)
13312935 BIOSIS NO.: 200100520084
Localisation of brain angiogenesis inhibitor receptor 1-3 mRNA in mouse,
rat and human brain.
2001

17/8/23 (Item 23 from file: 5)
13304311 BIOSIS NO.: 200100511460
RGD -modified proteins are potential carriers for drug targeting to
angiogenic endothelial cells.
2001

17/8/24 (Item 24 from file: 5)
13252152 BIOSIS NO.: 200100459301
Extracellular matrix-derived peptide binds to alphavbeta3 integrin and
inhibits angiogenesis.
2001

17/8/25 (Item 25 from file: 5)
13185465 BIOSIS NO.: 200100392614
Improved pharmacokinetics of (18F) RGD -peptides by serine-conjugation.
2001

17/8/26 (Item 26 from file: 5)
13184703 BIOSIS NO.: 200100391452

Recombinant truncated tissue factor/ Fc fusion protein as a target
anti-vascular therapeutic agent.
2001

17/8/27 (Item 27 from file: 5)
13162620 BIOSIS NO.: 200100369769
Thiolutin, an inhibitor of HUVEC adhesion to vitronectin, reduces paxillin
in HUVECs and suppresses tumor cell-induced angiogenesis .
2001

17/8/28 (Item 28 from file: 5)
13153744 BIOSIS NO.: 200100360893
Topical application of integrin antagonists inhibits proliferative
retinopathy.
2001

17/8/29 (Item 29 from file: 5)
13149962 BIOSIS NO.: 200100357111
Two RGD independent avb3 integrin binding sites on vascular basement
membrane derived tumstatin.
2001

17/8/30 (Item 30 from file: 5)
13126775 BIOSIS NO.: 200100333924
Identification of the anti- angiogenic site within vascular basement
membrane-derived tumstatin.
2001

17/8/31 (Item 31 from file: 5)
13118526 BIOSIS NO.: 200100322669
An angiogenic laminin site and its antagonist bind through the
alphavbeta3 and alpha5beta1 integrins.
2001

17/8/32 (Item 32 from file: 5)
13112023 BIOSIS NO.: 200100319172
Spinal cord repair with PHPMA hydrogel containing RGD peptides
(NeuroGelTM).
2001

17/8/33 (Item 33 from file: 5)
13056932 BIOSIS NO.: 200100264131
Pivotal role of integrins in shear-stress-induced release of bFGF from
endothelial cells.
2001

17/8/34 (Item 34 from file: 5)
12977601 BIOSIS NO.: 200100184750
Noninvasive imaging of alphavbeta3 integrin expression using 18F-labeled
RGD -containing glycopeptide and positron emission tomography.
2001

17/8/35 (Item 35 from file: 5)
12916650 BIOSIS NO.: 200100123999
Aberrant fibrin formation and cross-linking of fibrinogenNieuwegein, a
variant with a shortened Aalpha-chain, alters endothelial capillary tube
formation.
2001

17/8/36 (Item 1 from file: 155)
DIALOG(R) File 155:MEDLINE(R)

14543747 12206613 PMID: 12097104

Plasmin-induced Migration of Endothelial Cells. A POTENTIAL TARGET FOR
THE ANTI-ANGIOGENIC ACTION OF ANGIOSTATIN.
Sep 13 2002

17/8/37 (Item 2 from file: 155)
DIALOG(R) File 155:MEDLINE(R)

13419093 21932446 PMID: 11935158

Kinetics of integrin expression in the mouse model of proliferative
retinopathy and success of secondary intervention with cyclic RGE
peptides.
Feb 2002

Tags: Animal; Support, Non-U.S. Gov't

Descriptors: *Diabetic Retinopathy--drug therapy--DT; *Diabetic
Retinopathy--immunology--IM; *Integrins--biosynthesis--BI; *Neovasculariza-
tion, Pathologic--prevention and control--PC; *Oligopeptides--therapeutic
use--TU; *Platelet Aggregation Inhibitors--therapeutic use--TU; Disease
Models, Animal; Mice; Mice, Inbred C57BL; Oligopeptides--chemistry--CH;
Peptides, Cyclic--chemistry--CH; Peptides, Cyclic--therapeutic use--TU;
Retinal Vessels--pathology--PA

CAS Registry No.: 0 (Integrins); 0 (Oligopeptides); 0 (Peptides,
Cyclic); 0 (Platelet Aggregation Inhibitors); 99-96-84-2
(arginyl-glycyl-aspartic acid)

17/8/38 (Item 3 from file: 155)
DIALOG(R) File 155:MEDLINE(R)

13135317 12005376 PMID: 12109347

In vitro and in vivo evaluation of a Technetium-99m-labeled cyclic RGE
peptide as a specific marker of alpha(V)beta(3) integrin for tumor imaging.
May-Jun 2002

17/8/39 (Item 4 from file: 155)
DIALOG(R) File 155:MEDLINE(R)

13159195 11953399 PMID: 11959660

Dell mediates VSMC adhesion, migration, and proliferation through
interaction with integrin alpha(v)beta(3).
May 2002

Tags: Animal; Human; Support, Non-U.S. Gov't; Support, U.S. Gov't, P.H.S.

Descriptors: *Carrier Proteins--physiology--PH; *Cell Adhesion
--physiology--PH; *Cell Division--physiology--PH; *Cell Movement
--physiology--PH; *Muscle, Smooth, Vascular--cytology--CY; *Receptors,
Vitronection--physiology--PH; Apoptosis--drug effects--DE; Baculoviridae
--genetics--GE; Carrier Proteins--genetics--GE; Carrier Proteins
--pharmacology--PD; Chemotaxis; Embryo; Endothelium, Vascular--metabolism
--ME; Gene Expression; In Situ Nick-End Labeling; Neovascularization,
Physiologic; Oligopeptides--pharmacology--PD; Receptors, Vitronection
--antagonists and inhibitors--AI; Recombinant Proteins--pharmacology--PD;
Spidoptera--metabolism--ME

CAS Registry No.: 0 (Carrier Proteins); 0 (Dell protein); 0
(Oligopeptides); 1 (Receptors, Vitronection); 0 (Recombinant Proteins;
99896-85-2 (arginyl-glycyl-aspartic acid)

17/8/40 (Item 5 from file: 155)
DIALOG(R) File 155:MEDLINE(R)

13092970 21927641 PMID: 11930008

Osteopontin deficiency protects joints against destruction in anti-type

cell-surface attachment-promoting Arg-Gly-Asp (RGD) motif. MFBA was produced in *Escherichia coli* using a maltose-binding protein (MBP) fusion vector, but it was cleaved into four fragments even in a protease-deficient host. A 425-aa MFBA peptide containing the RGD motif named MFBA(582-1006) peptide was successfully produced using the phage T7 expression system. This MFBA(582-1006) peptide exhibited a cell adhesion and spreading activity toward mammalian cells. This activity of the MFBA fragment was competitively inhibited by the Gly-Arg-Gly-Asp-Ser-Pro peptide but not by the Gly-Arg-Gly-Glu-Ser-Pro peptide, showing that the RGD motif of MFBA is essential for the cell-binding activity.

DESCRIPTOR:

MAJOR CONCEPTS: Biochemistry and Molecular Biophysics; Cell Biology; Genetics; Membranes (Cell Biology); Molecular Genetics (Biochemistry and Molecular Biophysics); Reproduction

BIOSYSTEMATIC NAMES: Basidiomycetes--Fungi, Plantae; Fungi-Unspecified--Fungi, Plantae; Muridae--Rodentia, Mammalia, Vertebrata, Chordata, Animalia

ORGANISMS: Basidiomycetes (Fungi - Unspecified); Lentinus edodes (Basidiomycetes); Muridae (Muridae)

BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA): animals; chordates; fungi; mammals; microorganisms; nonhuman mammals; nonhuman vertebrates; nonvascular plants; plants; rodents; vertebrates

MOLECULAR SEQUENCE DATABANK NUMBER: amino acid sequence; molecular sequence data; nucleotide sequence; DDBJ-D01209; EMBL-D01209; GENBANK-D01209

MISCELLANEOUS TERMS: COMPLEMENTARY DNA; GILL TISSUE; MOUSE B16 CELLS; PILEUS; RGD MOTIF; SPREADING ACTIVITY; STIPE; TISSUE SPECIFIC GENE EXPRESSION

CONCEPT CODES:

11501 Cytology and Cytochemistry-Plant
11502 Cytology and Cytochemistry-Animal
11503 Genetics and Cytogenetics-Plant
11504 Biochemical Studies-Nucleic Acids, Purines and Pyrimidines
11505 Biochemical Studies-Proteins, Peptides and Amino Acids
11506 Replication, Transcription, Translation
11507 Biophysics-Membrane Phenomena
11508 Plant Physiology, Biochemistry and Biophysics-Reproduction
11509 Plant Physiology, Biochemistry and Biophysics-Chemical Constituents

BIOSYSTEMATIC CONECS:

11501 Basidiomycetes
11505 Muridae

26/9/5 (Item 5 from file: 5)

DIALOG(R)File 5:Biosis Previews-E)
(c) 1992 BIOSIS. All rts. reserv.

C9401791 BIOSIS NO.: 199598113709

Recombinant Domain III of Perlecan Promotes Cell Attachment through Its RGDS Sequence.

AUTHOR: Chakravarti Sanku; Hordley Teresa; Jefferson Bahiyah; Laurie Gordon W; Hassell John R(a)

AUTHOR ADDRESS: a)Dep. Ophthalmol., Univ. Pittsburgh Sch. Med., Eye Ear Inst., 213 Lothrop St., Pittsburgh, PA 15261 USA

JOURNAL: Journal of Biological Chemistry 270 (1):p404-409 1995

ISSN: 0721-9238

DOCUMENT TYPE: Article

REPORT TYPE: Abstract

LANGUAGE: English

ABSTRACT: Perlecan has been previously been shown to support attachment of a wide variety of cells through interactions of its core protein with the cell surface. The core protein domains involved in cell adhesion are, however, unknown. The laminin-like domain III of murine perlecan contains an RGDS sequence and is a likely candidate for supporting integrin-mediated cell attachment. We made a cDNA construct corresponding

in frame III and a short linker in frame IV fused peptide at the N-terminus as well as in frame a stop linker at the C-terminus. A cDNA library was constructed. The construct was inserted into the pMT vector and transfected into HT1080 cells, and the secreted recombinant domain III, a 130-kDa protein, was purified from the medium. The size of proteolytic fragments produced by digestion with V8 protease as well as analysis of the rotary shadowed image of the recombinant protein indicated it was produced in a native conformation. Recombinant domain III created on tissue culture dishes, supports adhesion of an epithelial-like rat mammary tumor cell line MMT 66962 in a dose-dependent manner. This interaction was inhibited specifically by the RGD synthetic peptide and intact perlecan, but not laminin. This domain III RGD-dependent cell attachment activity indicates a role for perlecan in integrin-mediated signalling.

REGISTRY NUMBERS: 155-37-7Q: INTEGRIN; 60791-49-3Q: INTEGRIN

DESCRIPTORS:

MAJOR CONCEPTS: Cell Biology; Genetics; Membranes (Cell Biology); Metabolism

BIOSYSTEMATIC NAMES: Hominidae--Primates, Mammalia, Vertebrata, Chordata, Animalia

ORGANISM: human, Hominidae

BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA): animals; chordates; humans; mammal.; primates; vertebrates

CHEMICAL & BIOCHEMICALS: INTRIN

NONCELLULAR TERMS: COMPLEMENTARY DNA; HT1080 CELL LINE;

INTEGRIN-MEDIATED SIGNALLING; PERLECAN

CONCEPT CODES:

- 02000 Cytology and Cytochemistry-Human
- 03000 Genetics and Cytogenetics-Human
- 11000 Biophysics-Membrane Phenomena
- 11001 Metabolism-Proteins, Peptides and Amino Acids
- 11002 Metabolism-Nucleic Acids, Purines and Pyrimidines
- 11003 Biochemical Studies-Nucleic Acids, Purines and Pyrimidines
- 11004 Biochemical Studies-Proteins, Peptides and Amino Acids
- 11005 Biochemical Studies-Carbohydrates

BIOSYSTEMATIC CODES:

06010 Hominidae

26/9/6 (Item 1 from file: 155)

DIALOG(R)File 155:MBDLINE(R)

12/11/83 11441324 0001: 11441321

Potential tumor-targeting peptide vector of histidylated oligolysine conjugated to a tumor-homing RGD motif.

Yaoki Y; Hosaka S; Kawa S; Kiyosawa K

The Second Department of Internal Medicine, Shinshu University School of Medicine, Matsumoto, Japan. yaoki55@hp.md.shinshu-u.ac.jp

Cancer gene therapy (England) Oct 2001; 8 (10) p783-7, ISSN 0959-1403 Journal Code: 9432231

Document type: Journal Article

Language: ENGLISH

Main Citation Owner: NLM

Record type: Completed

File: INDEX MEDICUS

We have developed a potential tumor-targeting peptide vector (cRGD-hK) that is intended to be systemically and repeatedly administered to patients with advanced solid tumors. The peptide vector of 36 L-amino acid residues, CRSDDF(K/H-JKKK)6, comprises a tumor-homing RGD motif, a DNA-binding oligolysine, and histidyl residues to facilitate the delivery into the cytosol. Using cytomegalovirus-driven luciferase expression plasmids as a reporter, we tested the transfection efficiency of cRGD-hK in hepatoma and pancreatic cancer cell lines. Transfection with the cRGD-hK plasmid complexes molar ratio 4:1:1 was inhibited by 100 nM batimastat A1, an inhibitor of the vacuolar H⁺-ATPase endosomal proton pump, or 100 nM cyclosporin, an integrin alpha5beta1 antagonist, indicating that the three elements of cRGD-hK could function as expected, at least in vitro. In nude

more bearing tumors created by subcutaneous inoculation, indicating activity in the tumor **tissues**. In tumor cells, the amount of the pM-pH-plasmid complexed through the tail vein, comparing plasmid per mouse, was significantly higher than that in the lung, kidney, and spleen, but only slightly higher than that in the liver. Although the latter difference was small, we propose a potential nonviral gene therapy for advanced solid tumors through use of the tumor-targeting peptide **vector**.

Tags: Animal; Human; Male; Support, Non-U.S. Gov't

Descriptors: *Gene Therapy--methods--MT; *Genetic Vectors; *Histidine; *Liver Neoplasms, Experimental--therapy--TH; *Oligopeptides--genetics--GE; *Pancreatic Neoplasms--therapy--TH; *Polylysine--genetics--GE; Antibiotics, Macrolide--pharmacology--PH; Enzyme Inhibitors--pharmacology--PD; Liver Neoplasms, Experimental--metabolism--ME; Liver Neoplasms, Experimental--pathology--PA; Luciferase--metabolism--ME; Mice; Mice, Inbred BALB C; Mice, Nude; Oligopeptides--pharmacokinetics--PK; Pancreatic Neoplasms--metabolism--ME; Pancreatic Neoplasms--pathology--PA; Plasmids; Polylysine--pharmacokinetics--PK; Proton-Translocating ATPases--antagonists and inhibitors--AI; **Tissue Distribution**; Tumor Cells, Cultured

(CAS Registry No.: 0 (Antibiotics, Macrolide); 0 (Enzyme Inhibitors); 0 (Genetic Vectors); 0 (Oligopeptides); 0 (Plasmids); 25184-1-1 (Polylysine); 31-10-1 (Histidine); 33899-15-2 (bafilomycin A1); 99896-88-2 (arginyl-glycyl-aspartic acid)

Enzyme No.: EC 1.13.12.- (Luciferase); EC 3.6.3.14

(Proton-Translocating ATPases)

Record Date Created: 20011031

26/9/7 (Item 2 from file: 155)

DIALOG(R)File 145:MMOLINE(R)

08423116 95171398 PMID: 7867945

A fruiting body-specific cDNA, mfbAc, from the mushroom Lentinus edodes encodes a high-molecular-weight cell-adhesion protein containing an Arg-Gly-Asp motif.

Kondo O; Mito A; Kajiwara S; Takagi J; Saito Y; Shishido K

Department of Life Science, Tokyo Institute of Technology, Yokohama, Japan.

Gene: MFBAC1; Feb 11 1996; 194 (2): 31-7; ISSN 0478-1119

Journal Code: 736794

Document type: Journal Article

Language: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Index: INDEX MEDICUS

A cDNA clone (designated mfbAc), encoding 2157 amino acids a.a., was isolated from a mature fruiting-body cDNA library of the edible mushroom Lentinus edodes. The mfbA transcript was abundant in mature fruiting bodies, detectable in immature fruiting bodies but absent in earlier developmental stages and in the vegetative mycelium. Although more abundant in the pileus than the stipe, only low levels were found in the gill **tissue**. The deduced MFBA protein (234.5 kDa) contained a cell-surface attachment-promoting Arg-Gly-Asp (RGD) motif. MFBA was produced in Escherichia coli using a maltose-binding protein (MBP) fusion **vector**, but it was cleaved into four fragments even in a protease-deficient host. A 421-a.a. MFBA peptide containing the RGD motif (named MFBA(582-1006) peptide) was successfully produced using the phage T7 expression system. This MFBA(582-1006) peptide exhibited a cell adhesion and spreading activity toward mammalian cells. This activity of the MFBA fragment was competitively inhibited by the Gly-Arg-Gly-Asp-Ser-Pro peptide but not by the Gly-Arg-Gly-Gly-Ser-Pro peptide, showing that the RGD motif of MFBA is essential for the cell-binding activity.

Tags: Support, Non-U.S. Gov't

Descriptors: Cell Adhesion Molecules--genetics--GE; *DNA, Complementary--genetics--GE; *DNA, Fungal--genetics--GE; *Genes, Structural, Fungal; *Oligopeptides; *Polyporaceae--genetics--GE; Amino Acid Sequence; Base Sequence; Binding, Competitive; Cell Adhesion; Cell Adhesion Molecules--chemistry--CH; Cell Adhesion Molecules--metabolism--ME; Cloning, Molecular; Escherichia coli; Molecular Sequence Data; RNA, Fungal